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ABSTRACT

These four newsletter issues for 1992 provide information about the use of (CD-ROM) technology in the school. Each issue contains one or more feature articles, along with program descriptions, examples of CD-ROM applications, and reviews of CD-ROM products and technology support. Volume 4, Number 2, focuses on the use of satellite information in all disciplines of the kindergarten through grade 12 curriculum in the Marple Newtown School District (Pennsylvania), in "Students Access Satellite Information." "Multimedia: Changing the Way We Teach and Learn" is the feature article in Volume 4, Number 3, a description of multimedia use and the Linkway system developed by International Business Machines. The lead article in Volume 4, Number 4, "Dateline: World, 2010," introduces the student of the future. Another article discusses school use of the Internet. Volume 5, Number 1, focuses on "CD-ROM: The Technology Impacting School Libraries." This issue also reviews 19 CD-ROM products available for schools. (SLD)

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INFORMATION SEARCHER

the newsletter for CD-ROM and online searching in schools

Volume 4, Number 2, 1992 - Volume 5, Number 1, 1992

IR054727

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Pam Berger

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Informatin Searcher™

the newsletter for CD-ROM and online searching in schools *vol.4,no.2 1992*

Students Access Satellite Information

What does an art class have to do with satellites? Plenty, according to the students and teachers of Marple Newtown School District in Pennsylvania.

There, art is just one of the subjects that is benefitting from space technology through PROJECT ExPEDITE, a creative program that makes use of satellite information in all disciplines of the K-12 curriculum, from geography, to math to social studies. "ExPEDITE" stands for "Exploring Planet Earth by Developing Imagery and Technology Education."

"The classroom applications of satellite technology are virtually unlimited," notes Alfred Capotosto, PROJECT ExPEDITE co-director and teacher "Our goal is not to change the curriculum but to use space-age methods to enhance the educational experience for our children."

Art students at Marple Newtown are using weather satellite pictures to study how we perceive and use color. Doing their own computer processing on image of cloud patterns, they can add false color to enhance particular aspects. Other classmates can then apply their study of photography to produce "hard copies" of the computer-screen images, as well as videotapes that record the progress of the project.

Industrial arts classes have applied their drafting skills to produce blueprints and model kits for selected satellites. Children at the district's elementary schools then assemble the models, write reports on their favorite satellite and listen to its signals. Ultimately, they visit the high school's receiving station to view pictures that come in live from their chosen spacecraft.

Fourth graders studying Pennsylvania history learn about the geography of their state by comparing traditional maps with Landsat satellite photos. Twelfth-grade physics students monitor weather conditions, oil spills, and oil well fires in the Persian Gulf by studying daily satellite images. Math students calculate orbits to keep the school's antenna pointed in the correct direction. Three seniors have written a satellite tracking manual that is being critiqued by an English class, while computer students create databases to log information being received.

"This approach makes learning meaningful to students, because they can see for themselves how their knowledge is being applied," states project co-director Keith A. Keyser. "Graphic arts and industrial drafting can come alive, for example, when a student creates something that fills a real need."

An integral feature that extends the impact is the concept of sharing information, ideas, and imagery with other schools across the nation. With the help of independent-study students, Keyser has set up an international database of schools with contacts. Schools from the United States, the Unified States, Germany and Norway responded to the initial communication.

"We want to create a network of ExPEDITE partners to share images and other educator and student-developed materials. Other schools will then be able to come to one source to gain good quality imagery and lessons to go with them. No one has ever gathered, cataloged, and coordinated this type of data before on this scale. We want it available to us in our own lesson development, and we are willing to make it available to others who would be interested," says Keyser. "Actually we see this as a cooperative effort by schools across the nation, to bring not-otherwise-available material to

> *"This approach makes learning meaningful to students, because they can see for themselves how their knowledge is being applied."*

continued on page 8

1992: International Space Year

ISY

The International Space Year (ISY) is the first year-long worldwide celebration of humanity's future in the space age. ISY will be highlighted by globally coordinated space activities in 1992 and coordinated planning for activities extending into the 21st century. There also will be wide range of public

The 1992 ISY was first proposed by U.S. Senator Spark Matsunage to commemorate the 500th anniversary of Columbus' voyage to the New World and the 35th anniversary of the International Geophysical Year (IGY) that ushered in the space age. It was embodied in legislation passed by Congress and endorsed by President Reagan and NASA. Subsequently, it won unanimous support from other nations and international organizations.

The ISY's over-arching theme is the global perspective of the space age. Other principal themes for ISY activities are discovery, exploration and scientific inquiry. An important ISY scientific program will be Mission to Planet Earth, in which ISY scientists worldwide are using space technology to assess such threats to the Earth's environment as global warming, deforestation and ozone depletion.

Already, a vast number of educational activities are planned for ISY '92, and that number is growing. The project include curricula, contests, exhibitions, films, television series, etc. Some of those activities involve global coordination, other are on a national, regional or local level: worldwide student videoconference organized by NASA, a special program at the 1992 National Science Teachers Association Convention; and environmental monitoring by elementary and secondary students.

NASA's Educational Affairs Division publishes an ISY Educational Activities Catalogue, updated quarterly, that lists such activities and provides appropriate names, address, and telephone numbers. To request a copy, write to: Educational Affairs Division, NASA Headquarters, Code XE, Washington, D.C. 20546

Editor's Note: Marple Newtown 's ExPEDITE Project (page one) has been chosen by ISY as its model school program.

1992 CD-ROM Educator's Award

***** *Nominations are being accepted* ****

The award will recognize a CD-ROM product for its excellence in design, high degree of interactivity, innovativeness and its unique contribution to K-12 education. School librarians, teachers, and producers of CD-ROM products may suggest candidates for the award. Judging will be by a panel drawn from the *Information Searcher's* Expert Panel, school librarians, and the editor. The deadline for nominations is September 1, 1992. The winner will be announced at the DATABASES IN SCHOOLS'92 Conference in Chicago, October 27 & 28 and will receive an engraved plaque and will be featured in the *Information Searcher*.

MAIN MENU

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Excellence in Online Education 1991: Two Award Winners

Ames High Schol, Ames, Iowa and Peachtree Junior High School, Atlanta, Georgia

ONLINE EDUCATION AT AMES HIGH SCHOOL

By Karlene Garn, Library Media Specialist

Online instruction has been an important component of the instructional program at Ames High School since 1985. It is integrated into the 9th and 10th grade curriculum areas of science, health, social studies and English so that all students have opportunities to go online using DIALOG, the card catalog of Iowa State University, Iowa State's VINCENT, and MINITEL. Regardless of the curriculum area, we try to teach students search strategy, truncation, connectors, and the ability to choose databases.

Identifying key words and thinking about the most concise way to ask for needed information are two key components in developing a search strategy. Truncation is important when students are searching for information electronically: words from a curriculum area are shown on a transparency and students decide the best place to truncate the word. We discuss truncation symbols; in DIALOG examples are given to show how to truncate both internally and externally, using the question mark.

The Boolean operators of AND, OR, and NOT are discussed and examples are shown to indicate what kind of information students might get depending upon the operator that is used. We demonstrate using AND as an operator to narrow a subject, the operator OR to broaden a topic and the operator NOT to throw out a particular aspect of a subject. The proximity connectors of (W), (N), and (F) are presented. The DIALOG Database Book is used to identify appropriate databases, listing all databases alphabetically, as well as by subject area.

The necessary commands to begin searching select databases, start a search, modify a search and retrieve the search results are given. Before a DIALOG search is done, a lesson is presented to the class. Each student is given a worksheet to complete that reviews the concepts presented; this worksheet is adapted to whatever curriculum area is being studied. Finally, students are asked to develop their own topics into search strategies, which enables us to see whether students need more time with a particular concept.

*Editor's Note: Two of the winners have been featured in previous issues of **IS:**Project Insite, Zionsville, IN in Vol.2,No.1, p.2 ;and Rocky Run Intermediate School, Chantilly, VA in Vol.3, No.1, p.3. The next issue will feature Rocky Mountain High School, Fort Collins, CO and Lyons Township High School, Western, IL*

The top winner, Project INSITE, has a guide containing 21 lessons plans and activities that focus on the use of the CLASSMATE Program, electronic mail and conferencing systems.
Send $10 (includes postage) to:
Project INSITE
Pleasant View Elementary
4800 S. 975 E.
Zionsville, IN 46077

At the ninth grade level, students are introduced to DIALOG in earth

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SAMPLE HONORS BIOLOGY SEARCHES

DB #	Hits per DB	Search Strategy	Total Hits
156	537	Lead()poison and water	592
306	0	S#/de	538
436			
41	176	Radiat? and environ? and waste	241
55	48		
76	17		
55	41	Bovine()growth()hormone and rat	238
229	0	S#/de	41
10	23	Seed()germinat? and (bean? or	
55	28	zinnia? or grass) and water	51
10	26	Plant? and light and angle	95
32	42	S#/de	68
10	6	Auxin and plant? and growth	1011
55	21	and soybean	27

Networking..continued from page 3

science classes. They check to see what information is available on their particular topics. World studies classes also use online searching to find current events in the area that they are studying. At the tenth grade level, students have opportunities to use DIALOG in biology classes, speech classes, and health classes.

For speech classes, the primary DIALOG databases searched are Magazine Index ASAP, Newsearch, National Newspaper Index and the Sport database.

Health class searches are more general in nature, depending upon the unit. One way we have maximized the benefit of demonstration searches is to do a different search for each class period. Each class period has an opportunity to develop a strategy for a particular problem and go through all the necessary steps. By the end of the day, all searches are saved and printed out.

Each honors biology students completes an original research project, first doing a literature search to see what, if anything, has been done on that research topic. Scisearch, Bioses, Medline, and Agricola are the primary databases searched. Samples of some of the search strategies done by students in these classes follows. They indicate the types of research students were considering, the databases they used the strategies they developed and the revisions they made. Often we use the Descriptor option to narrow a subject. If students did not get any hits, they revised with fewer ANDs. If they got too many hits, they revised with more ANDS or asked for the terms only if they were descriptors. This has been a particularly meaningful use of DIALOG for our students. Everyone is excited about the information they find: when information is limited, students feel that they have really undertaken some very original research.

At Ames High School we have an excellent periodical collection. We are

continued on page 23

ONLINE: BEGINNING IN THE MIDDLE AND JUNIOR HIGH CURRICULUM

By Blanche Ziegler , Media Specialist & Woody Driskill, Media Specialist

The Peachtree Junior High Media Specialists have met the challenge of teaching online searching to its 1200-member student body. Media specialists in the DeKalb County's junior and senior high schools have been teaching online searching since 1988. Approximately $300 per school per year was initially provided as an adjunct to the regular media budget allotment in each school. This amount is now simply accounted for within each media center's normal annual operating budget. For purposes of accountability, a simple search log is kept to provide a paper trail. The media specialists have been trained in online searching on DIALOG/ CLASSMATE, either as a part of their graduate programs or in staff development courses provided by the school system. Ethical uses of CLASSMATE, as noted later in this document, are observed.

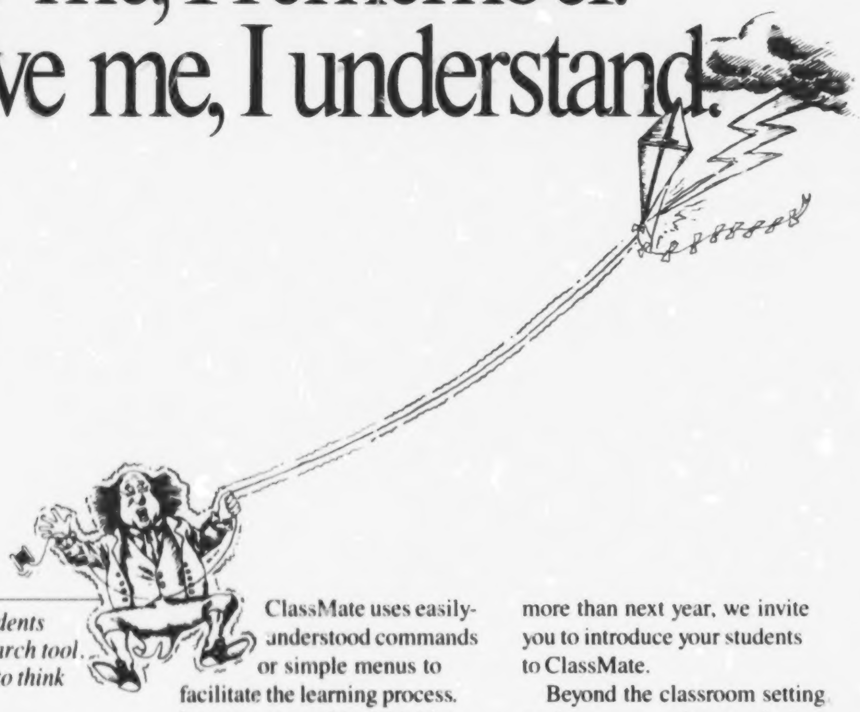
Teachers, particularly teachers of English, are often reluctant to "give up" the three days or more of instructional time needed to introduce students to online searching. Georgia's Quality Core curriculum (QCC) document is an excellent source of support in convincing teachers to participate in this instruction. The objectives their instruction must address across the curriculum are myriad. It is easy to pinpoint those which instruction in online searching can support. A selection of objectives from the Reading Curriculum is given in this document as an illustration. Resumes from individual courses are also helpful.

During the first year, only Impact (gifted) classes and other arbitrarily selected classes were taught. After some discussion of how to assure that all students had an opportunity to try online searching, the media specialists considered alternatives such as eighth or ninth grade English classes, or Georgia History classes at the eighth grade level. They then learned that a mini-course in study skills was being transferred from the Social Studies Department and would be taught to all seventh graders. Media Specialist, using cooperative planning and resource-based teaching efforts were

continued on page 6

Tell me, I forget.
Show me, I remember.
Involve me, I understand.

Ancient Proverb



Give your students more than a research tool. Give them a way to think for a lifetime.

"Go fly a kite."

That's how Benjamin Franklin might have encouraged the students of his day to better understand the relationship between lightning and electricity.

If he were around today, he could simply direct them to ClassMate.℠

ClassMate from Dialog is the very affordable, computerized research program designed to introduce students to the vast information sources available through online database searching.

ClassMate uses easily-understood commands or simple menus to facilitate the learning process. It encourages critical thinking skills while developing in students the ability to confront research problems logically.

ClassMate provides students and their teachers access to over 95 important databases providing volumes of information in the scientific, medical, social science, and business areas (including major newspapers).

ClassMate is supported by a student workbook, a teaching guide, a videotape, and many other valuable learning materials.

If you're a teacher committed to preparing your students for more than next year, we invite you to introduce your students to ClassMate.

Beyond the classroom setting, students can continue exploring Dialog's vast information sources with Knowledge Index, the commercial version of Classmate (available after hours—evenings and weekends).

For more information, call 1-800-DIALOG (800-334-2564). Or write to DIALOG Information Services, Attn: Marketing, 3460 Hillview Ave., Palo Alto, CA 94304.

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Networking/Peachtree JH

...continued from page 4

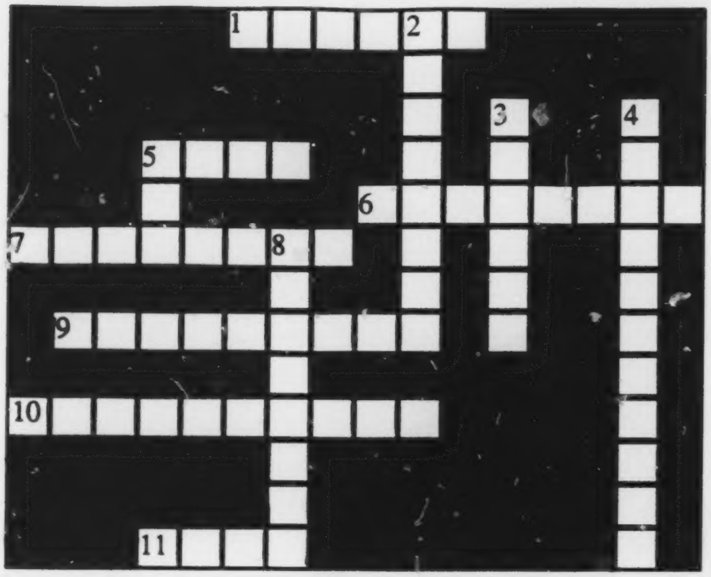
able to engage the study skills teacher's assistance in incorporating online instruction into the curriculum. With the exception of some band students, some special education students, and ESOL classes virtually all students at Peachtree are taught online searching during seventh grade. Special arrangements are made for working with students in the excepted groups.

The study skills students learn keyboarding skills in the computer lab before coming to the media center for online. Initially, they are taught in small groups, then given opportunities to hone their skills throughout their junior high school careers. Media specialists remind students during their subsequent instruction in various classes that online is a possible source of information. A simple reference interview with students wishing to go online assures that they have already had the introduction, and have explored applicable sources of information within the media center.

Ninth graders at Peachtree, as a part of the state-wide testing package, are given the "Test of Achievement and Proficiency." Grade equivalent scores at Peachtree attest to the validity of our instructional program. In the area called Using Sources of Information, Peachtree scores in the spring of 1991 were more that three grade levels above the national norm.

The following crossword puzzle and searching match were developed by Blanche Ziegler and Woody Driskill to teach online searching terminology.

CLASSMATE CROSSWORD PUZZLE



ACROSS CLUES

1. Using Knowledge Index to locate information in one or more Databases (strategy)
5. These trivial words are to used in searching: with, by, the, for, an, of, to.
6. Collections of information (citations in machine readable form)
7. Summary of an article or document
9. Logical or boolean ones used with the "FIND" command are: OR/AND/NOT
10. Using ? as a wildcard to locate variant spelling and words based on a root or stem.
11. Diagrams (circles) used to illustrate the logical relationships between sets (ideas/concepts)

DOWN CLUES

2. Instructions to computer to perform tasks: BEGIN/FIND/DISPLAY
3. Information retrieval service (vendor) of which Knowledge Index is a part
4. Word or phrase used to a citation by an indexer to describe the subject matter of the article
5. Group of records which Knowledge index temporarily "tags" for the convenience of the searcher.
8. Bibliographic part of the record which gives specifics about an Entry- author, journal, date...

CLASSMATE ONLINE DATABASE SEARCHING MATCH

On the left side is a list of nine definitions. On the right is a list of fourteen terms. For each definition, find the terms that it best describes and print the corresponding letter in the answer blank.

DEFINITIONS

__________ World's largest databank (vendor). The night/weekend version is called Knowledge Index; the abridged version for schools is called CLASSMATE.

__________ A mathematician who used circles to illustrate logical relationships between/among ideas or concepts.

__________ Boolean or logical operators used to tie concepts/ ideas together.

__________ Commands used to determine the length of the citation.

__________ Searching databases through use of a terminal that is connected through a telephone line.

__________ A dictionary of synonyms useful in clarifying search terms. Some databases such as ERIC publish their own versions.

__________ Terms or subject headings specifically selected by the databases's own indexers to be used to describe the subject matter of the article cited.

__________ Follow a stem or root with this symbol "?" so as to locate any extensions of the word in the database.

WITH, THE, BY, AND, FOR, AN, OF, FROM, TO--not usually used in searching.

____

TERMS

A. Stop words

B: OR AND NOT

C. "B", "F", "D"

D. Search strategy

E. Truncate

F. Abstract

G. Bibliographic citation

H. Venn

I. Online

J. Thesaurus

K. Descriptors

L. S1, S2, S3

M. Dialog

N. S/M/L or short, medium, long

Satellites..continued from page 1

the schools who want them," Keyser added.

These items would be available either through the mail or a computer bulletin board system that will be set up in the future. This proposed bulletin board will eventually link all of Marple Newton's school buildings for full teacher-access to images, data and lessons.

Dr. Thomas Kerr, assistant superintendent at Marple Newtown, is currently working with Keyser and Capotosto, trying to generate corporate partnerships and funding. The project now has two tracking stations, but hopes to have two affiliated laboratories to analyze and process satellite data received at the stations and through the ExPEDITE network. The long-range goal of ExPEDITE is to get the nation's schools involved as participants in the Mission to Planet Earth projects, commemorating the five-hundredth anniversary of the voyage of Christopher Columbus to America.

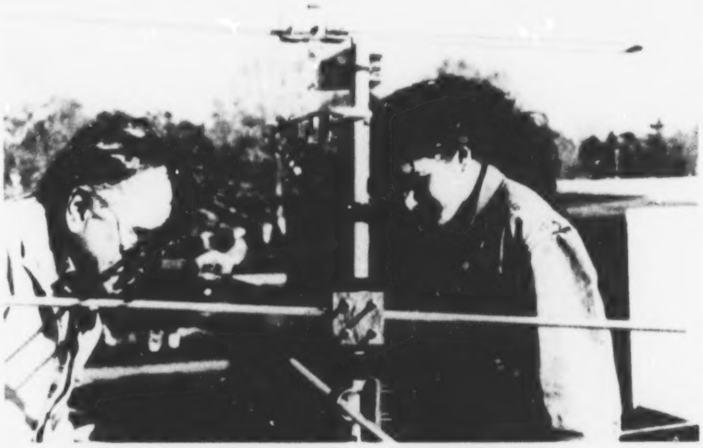
NASA and NOAA (National Oceanic and Atmosphere Administration) have joined in support of Marple Newtown's project and the U.S. International Space Year Association has selected Marple Newtown as its model school program for 1992, The International Space Year.

For further information, write to PROJECT ExPEDITE, Marple Newtown School District, 120 Media Line Road, Newtown Square, PA 19073

Excepts of this article were written by Ken Keyser and Danelle Simonelli

(*See accompanying article on page 2 for information on ISY and see* ***Yours for the Asking*** *column for curriculum units developed by Keith Keyser*

Students,Jack Tesa and Dennis Brennan, picking up an image at the station

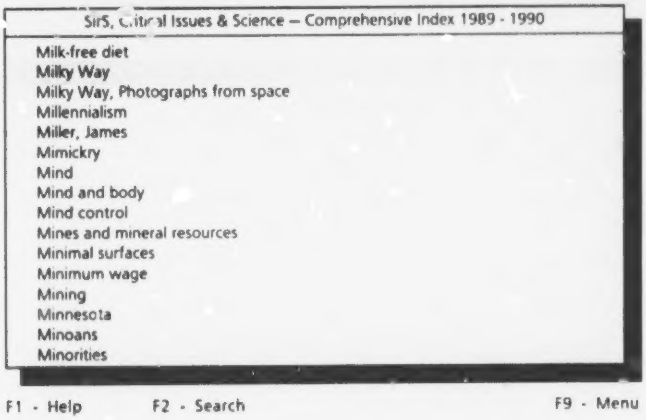


Gene Nalence, physics teacher andf Martine Belanger, studetn checking antenna on the roof

Graphics Arts student, Shog Soqhomanian, with model of geostationary satellite he designed for elementary students to construct as a part of their adopt-a-satellite lesson.

Yes Sir, Thank-You SIRS

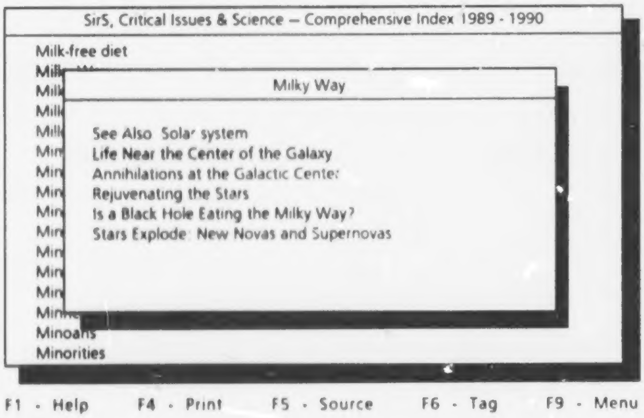
By R.B. Lasco, Media Specialist, Montgomery BlairHigh School, Silver Springs, MD



SirS, Critical Issues & Science — Comprehensive Index 1989 - 1990

Milk-free diet
Milky Way
Milky Way, Photographs from space
Millennialism
Miller, James
Mimickry
Mind
Mind and body
Mind control
Mines and mineral resources
Minimal surfaces
Minimum wage
Mining
Minnesota
Minoans
Minorities

Figure 1



SirS, Critical Issues & Science — Comprehensive Index 1989 - 1990

Milk-free diet

Milky Way

See Also Solar system
Life Near the Center of the Galaxy
Annihilations at the Galactic Center
Rejuvenating the Stars
Is a Black Hole Eating the Milky Way?
Stars Explode: New Novas and Supernovas

Minoans
Minorities

Figure 2

Students now have access to approximately three thousand carefully selected full-text articles from a diverse range of sources. Social Issues Resources (SIRS), a popular print resource in school libraries for over 20 years, is now available in CD-ROM format. SIRS Combined Text and Index ($1250) contains both SIRS Science and Social Issues and Critical Issues from 1989 in full-text with the necessary indexing; Social Issues and Critical Issues CD-ROM is available for $800 per annum and Science CD-ROM is available for $550 per annum. The 1991 release the Combined Text and Index also includes SIRS Global Perspectives database with no price increase. This database contains 481 articles which chronicle international issues and events: global history, government, economics and world affairs. Those libraries which already have all or some of the SIRS binders with print articles can order just the index on CD-ROM for $190 per annum.

SIRS CD-ROM uses a variety of access methods: Library of Congress Subject Headings, Article Title Search and Key Word Search. Choosing the Library of Congress Subjects Headings (LCSH) places the searcher at the beginning of the alphabetical list of LCSH; hit any letter on the keyboard to move to that letter on the list. Or press the F2 key to open a search window that allows the user to enter the list at particular words.(Figure 1) By pressing "Enter", titles referenced to that LC Subject are displayed. (Figure 2) The full-text of the article is available by pressing "Enter."

The Article Title mode offers the searcher a choice of the broad topics available in the SIRS binders/ volumes. Using the arrow keys the searcher moves the locator bar up and down through the list of broad subjects and years. (Figure 3) Select the choice of volume and year by simply pressing "Enter". An alphabetical list of the articles in that binder is displayed. Highlight the appropriate article and press "Enter" to see the full-text.

The SIRS CD-ROM also offers a key word search with boolean operators. The user may enter one word per line on three lines and differentiate them by choosing "and," "or," or "not', between each line. The screen displays the number of hits per key word, and also the cumulative combinations of line one, plus line two, compared to line three. (Figure 4)Additionally, a truncation function is offered. Adding and "*" to the end of a word causes the program to display a list of similar word forms, which can then be tagged for searching or ignored. Pressing "Enter" will display the article titles in which the requested key words appear in combination. The search words are highlighted in the articles.

The SIRS Combined Text and Index is an up-to-date and necessary resource. Its screens have very attractive graphic presentations and its ease of us is as high as any other CD-ROM product in the library. It has an advantage over many other CD-ROM's in that it contains full-text of the articles, which is so loved by students.

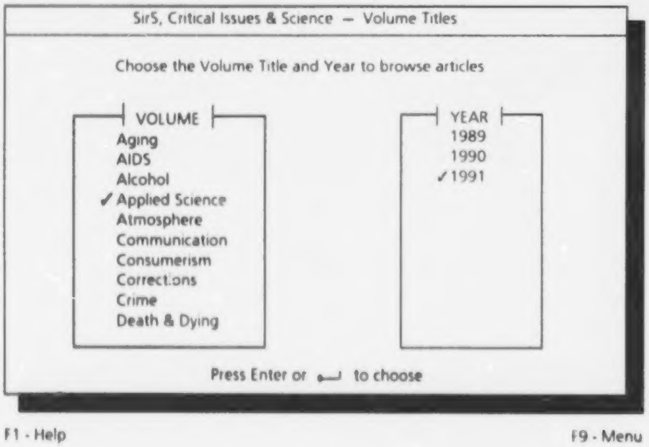
However, students have some difficulty in understanding the assumptions SIRS has to make. Magazine articles seldom offer basic or background information on many

continued on page 10

SIRS...continued from page 9

topics; their strong suit is to offer what is current, interesting and sometimes controversial. Students naturally want it all at once and over the easy way. Those who work through and into the enormously valuable information SIRS makes available are rewarded for their efforts.

The search modes chosen by SIRS is to be keyed to diverse searching styles. The key word search is chosen most often by students, but the Library of Congress Subject Headings is probably the most useful. The Key Word Search mode takes advantage of the power of CD-ROM search capabilities and for certain kinds of topics it is perfect. However, even though it offers a choice of boolean operators, it does not provide word proximity limits. This can mean that an article may have six or eight occurrences of the search word, but still be of no value to the searcher because the CONTEXT in which they are being used is not related to the search topic. For example, a request on "senior" "citizen" "rights" yielded an article on Gorbachev's policy toward the Baltic states. The best searchers continue looking by amending the sequence or choice of key words and thus access more cogent articles.



SirS, Critical Issues & Science — Volume Titles

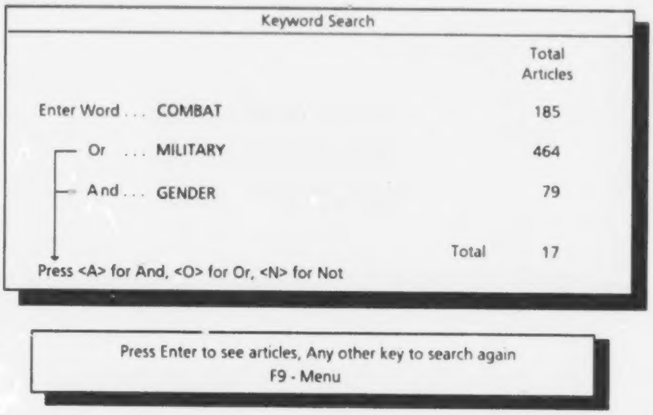
Choose the Volume Title and Year to browse articles

VOLUME	YEAR
Aging	1989
AIDS	1990
Alcohol	✓1991
✓ Applied Science	
Atmosphere	
Communication	
Consumerism	
Corrections	
Crime	
Death & Dying	

Press Enter or ↵ to choose

F1 - Help F9 - Menu

Figure 3



Keyword Search

		Total Articles
Enter Word . . .	COMBAT	185
Or . . .	MILITARY	464
And . . .	GENDER	79
	Total	17

Press <A> for And, <O> for Or, <N> for Not

Press Enter to see articles, Any other key to search again
F9 - Menu

Figure 4

Searchers have a few output options. In the text windows, on-screen articles can be read or printed in full or partial text, in which article line numbers can be identified and printed. The print function of the system is readily available and quite easy to use. This, unfortunately, can cause problems. What printer can keep up with dozens of article printouts every day? One solution is to use a combination of binders and printouts and vary student use as demand necessitates. For example, the system configuration has an option to make it impossible to print the text of articles, which would require students to use or copy the print articles in the binders. Another solution is provided by the SIRS system itself. It is possible and quite easy to download articles onto a floppy disk. The student can then access and print them out at another MS-DOS computer or take the disk home, retrieve it directly into their word processing programs and manipulate the information directly into papers, reports, etc.

The Library of Congress subject headings clearly reflect the content of the article, and also anticipate the points on the LCSH list at which a searcher might be looking for just such information. Another strong point in the program is the ability to block access to DOS without a password. Simple programming, but many systems so not offer it and the librarian is stuck rebooting the program several times a day. Additionally, the disks come with an attractive display card, as well as a useful and reproducible search strategy planning sheet.

Like many other CD-ROM's, SIRS does not translate its illustrations to disk. Perhaps the company anticipated that few users would have the necessary hardware to reproduce them. In most cases this should not directly detract from significantly from the usefulness of the information in most cases. In addition, many libraries will still have the SIRS binders with illustrations.

The first reaction our students had was disbelief. The CD-ROM is located near the 100-110 binders of SIRS articles in print format and they had trouble believing that ALL the information really was on the CD-ROM disk. Eventually, students will not only come to accept the idea that thousands of articles are available at a key stroke, but perhaps will begin to expect the latest articles from sources that are otherwise completely unavailable except on SIRS CD-ROM.

System requirements are IBM or compatible, 512K memory, hard drive

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Wilson Business Abstracts Gives You The Power

CD-ROM Collection Builders's Toolkit: An Excellent Resource

CD-ROM Collection Builder's Toolkit
Paul T. Nicholls, Eight Bit Books, Weston Ct, 1992. $39.95

Reviewed by Jan Jensen, Assistant Principal, Evergreen High School, Evergreen, CO

Few car buyers would make a final decision without test driving or making some comparisons between models. Consumer Reports has a long tradition of furnishing the shopping public with useful information. One of its more popular issues provides an automotive customer satisfaction poll on new and used cars. The publication gathers information from rating services and surveys its own readers. The readership in turn uses these comparisons to make decisions about new and used car purchases.

In a similar fashion, Paul Nicholls' **CD-ROM Collection Builder's Toolkit** (1992) provides educators with answers to questions that every library media specialists needs to know: What type of information is available on CD-ROM? What is the best value in CD-ROM products? What criteria should be applied to CD-ROM software and hardware selection? How do CD-ROM resources compare to online or other resources? How significant is the presence of CD-ROM in publishing marketplaces? What is the subject distribution of CD-ROM titles? Are there many titles published for the Macintosh, MSDOS platforms, or both? These and other questions are addressed in Nicholls' latest edition. His reference book takes a long and broad view of the CD-ROM industry while forecasting its growth and enhancements.

The 1991 edition of **CD-ROM Collection Builder's Toolkit** lays a framework of information about CD-ROM publishing trends, products, reviewing sources, application in libraries and search commands. This comprehensive and timely earlier volume filled a void for many who were investing heavily in indexes, databases and just beginning to acquire substantive sources as well. Both the earlier and later guide clearly outline the following: machine requirements, costs, vendor/producer, system overview, overall ease of use, documentation, database content and quality, search capability, search management and output capability. The hardware checklist examines the following: 1) the microcomputer-- its basic platform, microprocessor, bus architecture, operating system and manufacturing; 2)the CD-ROM drive-- its basic function, drive speed, interface card, audio capability, purchasing considerations, and benchmark test references; 3) the peripherals-- its primary input/output, hard disk drive, floppy disk drives, video display, modems and printer.

At a time when fewer users were networking, when CD-ROM and multimedia products were less prevalent, this book assisted the neophyte make decisions about stand alone applications. As CD-ROM applications and users have grown more sophisticated, so has the need for information.

In his 1992 edition, Paul Nicholls brings to CD-ROM investors "What Makes a CD-ROM Great" and "State of the Union in CD-ROM" update. This most recent book places attention on networking, various hardware platforms and user communication with publishing sources. He compiles publishing considerations, a CD-ROM "hit parade," menuing alternatives, updates and revisions, workstations security and personnel implications. Inclusion of the "CD-ROM Manifesto" for the Corporate Librarians Group of New York assuages those information professionals who collectively have concerns about standards, interfaces, networking, sales and support. The discussion of these topics makes Nicholls's book even more valuable. It provides meaningful data for school library media specialists to use in educating their school faculties and administrators. Many of the graphs and charts make readible convincing transparencies for budget proposals.

The greatest value of the **CD-ROM Collections Builder's Toolkit** (1992) has been the continuing four star product review, which synthesizes ratings and highlights award from the

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industry. Few small school library media center budgets can afford the subscriptions and directories in Nicholls's books. This reference provides the quintessential criteria for selection and evaluation as well as product profiles. This annual information is an important service, especialy as the number of available products increase.

School library media specialists serve customers who produce teaching and learning materials in hypermedia or multimedia. The spread of these tools in the classroom and media centers has an impact on the popularity and interactivity of multimedia based CD-ROM products. "Gee-whiz" sells to schools because multimedia responds to the nonlinear approach to information searching and processing. It accommodates varying learning styles. Nicholls points out that the current proportion of multimedia titles is "still relatively small." IBM's Ulysses Project and its latest development with Time-Life on Presidents will have an influence on the educational marketplace. Like the "Beethoven" series on the Macintosh did, newer multimedia products will find their way into more schools and homes.

Just as the wary car shopper slams doors, punches stereo controls, flicks overhead and hazard lights, turns up the heat and air conditioning and kicks the tires--so too does the CD-ROM buyers want to consider all the options. Dr. Nicholls offers readers an extensive directory of publishers and distributors and a bibliography of sources on every topic from security to legal aspects, from networking to resource sharing. He includes a section called, "How We Done Good...". These library success stories furnish readers with a roledex of users who can attest to their own decisions with CD-ROM management. Nicholls profiles every major CD-ROM product and, like a winetaster, rates each according to its acceptance by reviewing sources on installation, documentation, data quality, search power, ease of use and bottom line.

Few practical, reference tools on educational technology are as

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Flash Your Message With TEXTSHOW

By Aggie Raeder, Head of Public Services, UCLA Engineering & Mathematics Science Library, Los Angeles, CA

In a previous issue of Information Searcher I explained how useful AUTOMENU can be when accessing multiple CD-ROM's from one computer. I promised I would share other programs that interact with AUTOMENU: one I use frequently is TEXTSHOW. This is a shareware program I obtained from UCLA's PC Users Group. It is written by Tom Rombouts, and it provides the capability of displaying moving text as letters passing across the monitor screen. A black and white monitor can be used with TEXTSHOW, but a color monitor will show the program at its best. I have used it within AUTOMENU to communicate with the user. If the user selects a database which requires the library staff to insert a new CD-ROM disk, TEXTSHOW will display in large colorful moving letters. "ASK LIBRARIAN FOR THE THOMAS REGISTER CD-ROM DISK". These words roll by just once, and then AUTOMENU activities the opening display of Dialog's Ondisc search software.

TEXTSHOW also has been helpful in another situation. At the workstation which had four daisy-chained drives, we have Compendex, which is actually on six CD-ROM disks. If the user finishes the four disks and exists the Dialog Ondisc software, then just before AUTOMENU returns, TEXTSHOW rolls out the message in red letters on a blue background: "ASK LIBRARIAN FOR 1985 AND 1986 CD-ROM DISKS". When we first got the Compendex database and its dedicated workstation, we advertised it using TEXTSHOW running on the new workstation. TEXTSHOW repeatedly ran the following phrase: "COMPENDEX, THE LARGEST ENGINEERING DATABASE" in aqua and orange letters, followed by these letters in yellow and green: "CONTAINS ARTICLES AND CONFERENCE PAPERS ON ALL ENGINEERING TOPICS". These phases would cycle in alternating fashion until the user pressed the escape key (ESC),. Then AUTOMENU's opening screen would display and Compendex could be selected.

TEXTSHOW is an exciting program with great potential for creativity, especially if you have a color monitor. You can select five different sizes of letters, set it for any speed, and use any color combination that your monitor supports. It even can play music, if your batch file lists the notes and duration of each note and pause. TEXTSHOW will even run on microcomputers without a graphic adapter. Using batch files you can get two or more messages to alternate and you can specify how many times they will repeat. You can have the moving text display in a box, and adjust the size of the box. The area surrounding the box can display graphics characters in a checkerboard or stripped pattern, or will display additional text in tiny letters that your specify. You can set the background color, foreground color and also the color of the box border. Here is an example of how easily a TEXTSHOW message can be constructed:

```
 TEXTSHOW -C 30 -A "now " -S 3 -Z 2 "DO IT! "
```

This produces the text "DO IT!" moving from right to left while the background displays in tiny print "now". The -C determines the background/foreground colors;-A paints the background with the text you have in quotes; -S sets the speed; -Z sets text letter size. Following all that, place the desired text in quotes, and it will roll past on your screen.

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SPHINXES, DIAMONDS, AND WEREWOLVES

By Lee Sapienza, Librarian, Wayland Public Schools, Wayland, MA

Editor's Note: This is Part I of a two-part article on the PAPERS Database. Part II, which will illustrate some of the search techniques outlined in this article, will be published in the next issue.

An irrepressible flash of concentrated energy burst through the Media Center doors, and announced "Mr. Smith says I'll probably need to go online for my research paper on the Sphinx!" While I tried to fathom what kind of spell some Saturnalian fury had cast over Mr. Smith, the head of the classics department, beautiful, sparkling Jyl expounded on requirements for her ancient history project.

Mr. Smith, one of the country's finest instructors in classical and medieval studies at both the university and high school levels, certainly knows the sources in his field - but the online solution seemed somewhat off the mark. So, with some skepticism, I suggested that we first check available print resources. A few minutes into the search, I realized, that excellent scholar that he is, Mr. Smith was already aware of the paucity of authoritative information in printed sources that one would expect to find in unspecialized library collections. There are one-paragraph references on the sphinx in archeological books and articles on the pyramids of Cheops and Kaphre over which the Sphinx stands guard, and there certainly are pictures of the centuries-loyal denizen. But these sources do not have sufficiently detailed information on the Sphinx itself that would be acceptable for Jyl's senior term paper.

Was there a restoration of the Sphinx in progress? I asked. A fast check in a CD-ROM index - and there it was!! In 1988, the archaeological shot heard round the universe occurred when a quarter-ton chunk of limestone fell from Pharaoh Kaphre's Great Sphinx - and the world of archeologists, scientists, and geologists rushed to save the royal beast from further deterioration. The CD-ROM reference was a pointer to the online newspapers. The press would surely cover such a significant event. There were a few citations in Magazine Index - but the jackpot was located on-line in DIALOG's Papers collection.

The process of restoration had uncovered new evidence that the Sphinx may be twice as old as previously thought. A fierce argument was triggered between geologists who say it must be older and archeologists who say that conclusion contradicts everything known about ancient Egypt. The still raging debate is the stuff of newspaper headlines, and journalists competed with each other in their attempts to uncover as much of the Sphinx lore as possible. Consequently Jyl found all of the history and background of the Sphinx that she needed for her report - and more.

After repeatedly finding that current day online newspapers (unlikely as it might seem) may well provide the solution to historical research questions after all else has failed, one is tempted to toss discretion to the wind and jump online as the ULTIMATE SOLUTION for any, and all questions. I am learning that one must take on faith a saying that is fast becoming a truism:- **If you can't find it online - you're not going to find it anywhere!!**

With the advent of the electronic editions of full text newspapers, any topic can be fair game for an online search. After all-newspapers hold the day-to-day record of civilization. The comprehensiveness of newspapers encompasses events of such an ephemeral nature that they usually do not merit space in magazines or books -events whose significance may have passed at the moment of occurrence, but were recorded for posterity by some alert, enterprising reporter. This is the unique quality and advantage that distinguishes newspapers.

The serendipitous nature of newspapers is one of their biggest drawing cards for a school curriculum. They are so full of the unexpected that their hidden riches remain untapped in print format, but, with the ease of on-line access, literally leap out on the computer screen.

PAPERS IN THE SCHOOL PROGRAM

The Papers Collection on DIALOG Information Services easily qualifies as the most valuable of online databases for a school program. The content value of newspapers is indisputable. National and international news, local events, regional coverage, politics, government, economics, business, travel, opinion, the arts and sciences - all receive coverage in some degree. In short, newspapers provide a tremendous amount of information, the scope of which cannot be

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matched by any other medium. Papers provides both contemporary and retrospective information for every curriculum area and serves every segment of the school population: students, teachers, administrators, and support personnel. And it provides this educational nirvana cost-effectively while eliminating problems of storage and physical administration inherent in hard copy or microfilm newspaper collections.

The superb ease and simplicity with which the critical information in newspapers can be accessed and retrieved are the greatest advantages that DIALOG's Papers collection offers to the school curriculum. The typical inconveniences of searching hard copy newspapers, which, in the past, discouraged student and teacher use, are eliminated. Online newspapers are always perfectly organized and indexed so that information about specific subjects, people, and events, contemporary or historical, can be located instantly and easily at the press of a key. The superlative multi-point access and speed of computerized retrieval possible through back-files of newspapers, the capability to search up to forty files simultaneously through Dialog's ONE-SEARCH feature, instant access to **full text** online, and **currency** of information through **daily updating** are some of the unparalleled benefits Papers brings to school programs.

Some of the other bonuses of Papers for the school program:

-- Access to primary source materials, through eyewitness accounts and direct quotations from active participants. Reading a newspaper is usually the "next best thing to being there."

-- Access to local and statewide news, information that would almost never be found in traditional databases and is extremely valuable to students writing term papers.

-- Access to a wider view of societal issues than is generally found, through, for example, the opinion and editorial sections of the daily metropolitan newspapers, through the "person-on-the-street" viewpoints, and through letters-to-the-editor columns.

Your students need never again face hours of frustrating page-by page search for an elusive topic. Students find that research is easy and enjoyable using the Papers Collection.

> ***"The Papers Collection on Dialog Information Services easily qualifies as the most valuable of online databases for a school program."***

They can search the entire newspaper using natural language. With the popular reading level of most newspapers, and the journalistic slant of news stories, that give the as-we-see-it" perspective, Papers easily wins the online popularity contest with students from elementary through high school.

CONTENTS OF THE PAPERS COLLECTION

The nation's leading newspapers are represented in PAPERS - thirty-five, at the time of this writing, including some of the most renowned and respected for their authoritative and balanced reportage, papers such as: the Washington Post, the Chicago Tribune, the Los Angeles Times, the Philadelphia Inquirer, the Christian Science Monitor, USA Today, and other metropolitan dailies. One or more newspaper titles are being loaded each month into Dialog's powerful and flexible search engine from its sister service Vu/Text (an online service with over seventy full text newspapers).

PAPERS excels in providing a broad perspective and in-depth analysis of national and international daily news: crises, wars, summit meetings, all of the major news stories, such as the attempts to reach a Palestinian-Israeli peace agreement, the overthrow of communism in Eastern Europe and the quest for democracy throughout the Soviet Republics, global economic and environmental issues. The major newspapers are excellent sources for investigative reporting of government agencies, for complete transcripts of Presidential news conferences, and for the text of interviews with the world's leading personalities, both political and social.

The latest advances in science, technology, and medicine may appear on the front pages, in special magazine features, or the regular science sections of these papers; look here for up-to-the-minute accounts of the latest breakthroughs in chemistry and genetics, for reports on the background and awards of the Nobel Prize winners, for detailed reports on the deteriorating ozone layer throughout the world; and, accounts of how various foreign nations are dealing with acid rain and other forms of pollution. This latter coverage is one of the **most valuable features of the on-line Papers collection for American students**, since the usual periodical sources give scant attention to other nations when dealing with such topics.

The country's regional newspapers also provide coverage of national and international news, but concentrate on those issues of greatest interest to a specific area of the country, such as: in-depth daily business news on local industries; environmental concerns for the area; state and local elections; statistics on the homeless in the area; crime and local law enforcement activities; reviews of cultural activities, music, art, movies, and reports on sports teams in the area.

ORGANIZATION

PAPERS (the full collection) By using Dialog's powerful OneSearch feature, all of these 35 newspapers can be searched together on any topic, name, keyword, or phrase. Simply enter the command BEGIN PAPERS and enter your search terms. Search

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fields have been made consistent across the Papers files to facilitate retrieval of articles from the collection as a whole. To speed retrieval, Dialog also provides sub-groups of these newspapers so that searches can be efficiently limited to those newspapers **most likely** to contain relevant information on the topic.

CATEGORIES

U. S. newspapers with the highest circulation and/or influence have been grouped into a single category called **PAPERSMA**. When you need a quick overview of what the most influential U. S. Daily newspapers have to say about an event, issue, industry, or person, simply enter BEGIN PAPERSMA, and your search will be carried through eleven leading newspapers: the Washington Post, Detroit Free Press, Los Angeles Times, Boston Globe, Chicago Tribune, Philadelphia Inquirer, Newsday, San Francisco Chronicle, Miami Herald, USA Today, and the Christian Science Monitor. In addition to providing a broad survey of a topic, the reporting in this category of newspapers is useful in helping you determine how the media is covering the issue and the public's reaction to it.

Students in contemporary and social issues classes, studying topics of nation-wide import such as the health care crisis, recession and unemployment, the plight of the homeless, environmental policies, the failure of the banks, the decline of the real estate, automobile, and airline industries, and the Japanese factor in our failing job market can find overviews, supporting background information, and authoritative analyses in PAPERSMA, a grouping of the most influential newspapers.

For comparison and focus, after you have an overview of the topic from the major newspapers, you can search the **four regional sub-categories** to determine how particular areas of the country are effected or are responding to a particular issue.

PAPERSNE: newspapers from the Northeastern states Massachusetts, New York, & Pennsylvania
PAPERSSE: newspapers from the Southeastern states: the District of Maryland, Virginia, and South Carolina
PAPERSCE: newspapers from the Central states: Ohio, Illinois, Michigan, Colorado, Missouri, Minnesota, & Texas
PAPERSWE: newspapers from the Western states: Arizona, California, Oregon, and Washington

If the topic is one of local interest, you can restrict the search to one of the four regional sub-categories above - or better yet - if the area has a major metropolitan newspaper - search in single newspaper files (e. g. the San Francisco Chronicle, the Boston Globe, the Palm Beach Post)..

For example, seniors in Urban studies were investigating the social, economic, political, and cultural effects of redistricting on various towns and cities throughout the United States brought about by the 1990 census. We ran this unit in March 1991 - official census figures had not yet been released to the states. Here again, the recency of newspapers paid off. Data was trickling through and was being reported in the press. In combination with the actual (but incomplete) census figures in the Cendata database, students used PAPERSMA to get the national picture. Each student then had to choose some city or town in the country as an imaginary home town, and using one of the regional sub-categories of PAPERS, find how it was affected by the 1990 census. For example, the student who had chosen San Jose (California) could search a group of papers in PAPERSWE (newspapers from the West), or, search the San Jose Mercury News directly and receive more in-depth information. The student who chose his home town of Wayland, a suburb of Boston, very efficiently searched directly in the Boston Globe, rather than in PAPERSNE (the category for the Northeast)..

Our World Cultures classes in freshman social studies spend half of the school year studying the background, history, political structure, economic conditions, local controversies, and international relations of various cultures around the world. During the latter half of the

PAPERS

Washington Post
Arizona Rep./Phnx Gazette
St. Louis Post Dispatch
Columbus Dispatch
Sacramento Bee
Sun Sentinel
Detroit Free Press
Los Angeles Times
Boston Globe
Chicago Tribune
Philadelphia Inquirer
San Jose Mercury News
Newsday/New York Newsday
Houston Post
San Francisco Chronicle
Rocky Mountain News
Charlotte Observer
Paul Pioneer
Miami Herald
USA Today Fulltext
Oregonian
Orlando Sentinel
Times Picayune(New Orleans)
Seattle Times
Akron Beacon Journal
Richmond News Leader
Palm Beach Post
Atlanta Journal/Const.
Baltimore Sun
Christian Science Monitor
Daily News of L.A.
Washington Times
Pittsburgh Press
Times Union
State (Columbia)

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year, each student chooses a single foreign country as the topic of his final report. During the last month of the year, each student (nearly 100 of them), by now well-informed about the issues and problems facing his particular country, go on-line. The faculty-mandated "recency requirement" makes searching on-line in PAPERS mandatory. Students had to find information within the last three months to determine the CURRENT status of issues critical to that country's welfare. Papers on-line has revolutionized this assignment which, in print, can be overwhelming and unwieldy for those students whose countries are at the top of the headlines, and deathly frustrating to students who have chosen countries whose existence has not made the reporter's popularity list. The least known of primitive peoples, waging bush wars with neighboring tribes in Third World countries can be found on-line in Papers. And, although it may be buried on some back page, finding the article is a snap with Dialog's indexing.

Some of the topics reported on by students:

- -- North Korea's nuclear threat
- -- Quest for democracy in Nigeria
- -- Pro-Western UNITA rebel forces vs. marxist MPLA troops in Angola bush war
- -- Civil War and chaos in Somalia
- -- Famine in Indonesia
- -- Co-existence of Christians and Muslims in Lebanon
- -- Nawaz Sharif's government in Pakistan after deposition of Benazir Bhutto
- -- The Persian Gulf War was examined from the viewpoint of nearly every country within or bordering on the Middle East

Online newspapers are a gold-mine of resources for the English curriculum. The headlines, the front pages, the editorial and op-ed pages - all furnish background information for students' various expository and resource essays, creative writing assignments, position papers, and supporting fact and opinion for debating teams. And Papers is a bottomless well for the perpetual requests for reviews of books and movies.

ACCESS TO LOCAL AND STATEWIDE NEWS

Newspapers give electronic access to local and statewide news, information that is almost never found in traditional databases. The availability of the complete text of major Metropolitan dailies for every area of the nation has made it possible for teachers to customize their curricula so that it is of immediate significance to students. It has always been a problem to acquire and store local-interest materials - and even more of a problem providing up-to-date materials dealing with topics of concern and interest **directly within the students' neighborhood.** Here are a few examples of projects that dealt with issues in which there was a great deal of natural interest and curiosity for our students because of physical proximity. The population in our school is composed primarily of youngsters who are Wayland residents and a small group of Metco youngsters who are bussed in daily from Boston. The **Boston Globe** full-text was the golden egg of information for topics such as:

-- Implications of the closing of the General Motors plant in Framingham, MA (town next door to Wayland)
-- Statistics on the homeless in Boston
-- Child labor violations at various Burger Kings & other fast food chains in our area
-- What has sports meant to the development of Boston
-- Boston University President Silber's outspoken and indiscreet remarks on medical care for the elderly during his campaign for Governor
-- The Charles Stuart murder case in Boston (a case of local interest that exacerbated racial tensions and divided the community in Roxbury)
-- Redistricting implications in Roxbury and Mattapan areas of Boston
-- Industrial pollution in the Sudbury and Merrimack Rivers (the Sudbury River skirts our campus)
-- Massachusetts Governor Weld's educational reform plan **Massachusetts 2000**
-- Controversy over the Seabrook (NH) Nuclear Power Plant's return to on-line status

Schools throughout the country have their own lists of local interest topics and can turn with confidence to the Papers collection for their solution. Thanks to the Papers collection media specialists will never again have to say "I'm sorry," to their students. Even infinitesimal items manage to make their way into the newspapers. As my students and I have discovered - **Papers are a revelation!**

STREAMLINING SEARCHES IN PAPERS

Papers is the dream world of research for which your students and teachers have yearned. But don't be lulled into a false sense of security. Searching Papers is full text searching at maximum throttle - and all of the caveats that apply to full text searching in general apply (with a vengeance) to the multi-file Papers collection. Full text searching can be treacherous. Care must be taken to insure a minimum of false drops and records of marginal interest. In this veritable ocean of words, unless your search terms are very specific, or delimited by field, searching full-text databases can be a self-defeating exercise in futility. Fortunately, DIALOG's powerful and flexible search engine provides several features to help focus your search and to shield you from being avalanched with an unwieldy number of articles, the irrelevant as well as the useful.

ONE GENERAL SUGGESTION

Unless there are clear indications that a citation is **exactly** what you are looking for, **scan search results to verify relevance before down-loading the full text of any record.**

Use the KWIC (Key Word in Context) option (which shows the portion of the records in which search terms appear, and the HILight option, which surrounds keywords with asterisks to facilitate their rapid location.

In a OneSearch session, you can sample the records retrieved in each

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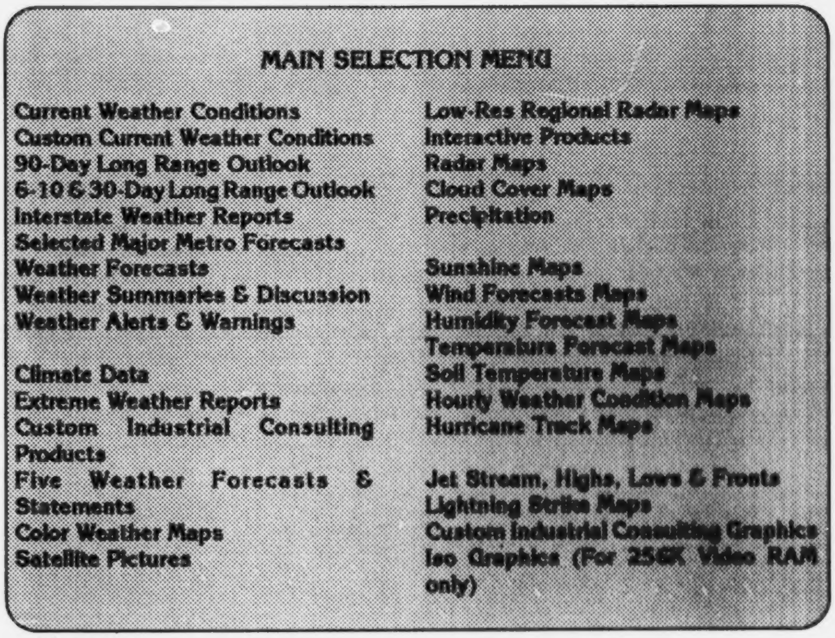
WeatherBrief: Clouds, Radar , Hurricanes and More

By Deborah L. Squire, Chair, Library Media Department, Pelham High School, Pelham, NY

Want to know the current weather conditions in New York? Or the 30 day outlook for the West Coast? How about weather alerts and warnings for Texas--or the expected precipitation in Michigan? No problem if you need a Cloud Cover Map of the United States or a map pinpointing Lightning Strikes. This and more is available quickly and cheaply through an online software package called WEATHERBRIEF

WEATHERBRIEF provides and extensive range of detailed, professional weather data.(Figure 1) Access to the information is via a relatively simple menu-driven system requiring the user to select and highlight a group of two to eight desired weather items from a menu of 28. Once this specific group of weather items is identified and tagged, the WEATHERBRIEF program automatically dials, requests, receives and downloads the weather information specified, and terminates the call. The information is then available for display and off-line printing. Screen displays are in color.

Since there is no need for user interaction online, the process is quick and inexpensive. There is a direct-dial number (801-530-3188) at a cost of $.20 per minute and a toll-free number (800-827-2727) at a cost of $.35-$.43 per minute, depending on the time of day. I received the following tabular information: Current Weather Conditions for New York this hour and the six to ten-day and thirty-day Long Range Outlook for the East, for a total of $.08 in 24 seconds



MAIN SELECTION MENU

Current Weather Conditions
Custom Current Weather Conditions
90-Day Long Range Outlook
6-10 & 30-Day Long Range Outlook
Interstate Weather Reports
Selected Major Metro Forecasts
Weather Forecasts
Weather Summaries & Discussion
Weather Alerts & Warnings

Climate Data
Extreme Weather Reports
Custom Industrial Consulting Products
Five Weather Forecasts & Statements
Color Weather Maps
Satellite Pictures

Low-Res Regional Radar Maps
Interactive Products
Radar Maps
Cloud Cover Maps
Precipitation

Sunshine Maps
Wind Forecasts Maps
Humidity Forecast Maps
Temperature Forecast Maps
Soil Temperature Maps
Hourly Weather Condition Maps
Hurricane Track Maps

Jet Stream, Highs, Lows & Fronts
Lightning Strike Maps
Custom Industrial Consulting Graphics
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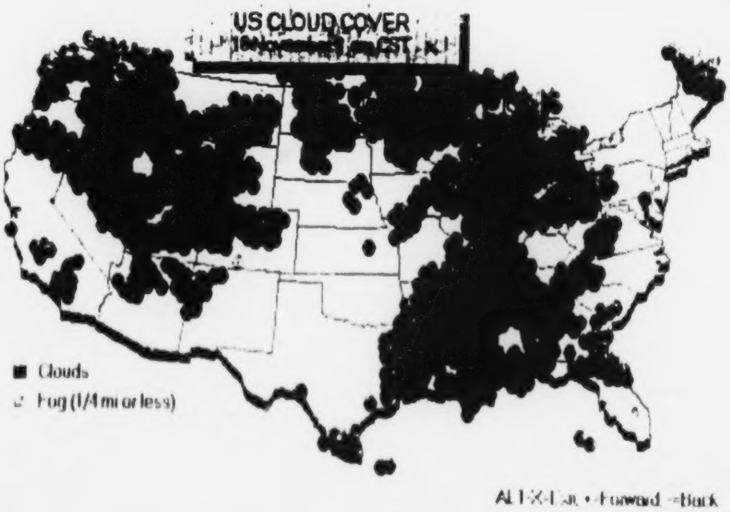
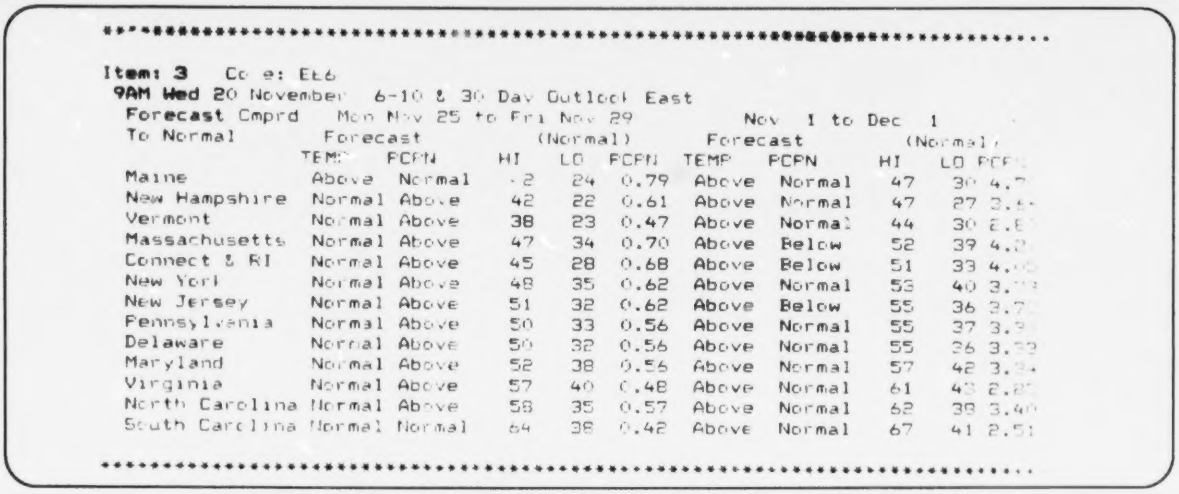
(Figure 1)



U.S. Cloud Cover Map (Figure 2)



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*****************************************************************************
Item: 3   Code: EE6
 9AM Wed 20 November  6-10 & 30 Day Outlook East
  Forecast Cmprd   Mon Nov 25 to Fri Nov 29            Nov  1 to Dec  1
  To Normal       Forecast          (Normal)       Forecast          (Normal)
                 TEMP   PCPN      HI    LO  PCPN  TEMP   PCPN       HI    LO PCP
  Maine          Above  Normal    42    24  0.79  Above  Normal     47    30 4.7
  New Hampshire  Normal Above     42    22  0.61  Above  Normal     47    27 3.6
  Vermont        Normal Above     38    23  0.47  Above  Normal     44    30 2.8
  Massachusetts  Normal Above     47    34  0.70  Above  Below      52    39 4.2
  Connect & RI   Normal Above     45    28  0.68  Above  Below      51    33 4.0
  New York       Normal Above     48    35  0.62  Above  Normal     53    40 3.
  New Jersey     Normal Above     51    32  0.62  Above  Below      55    36 3.7
  Pennsylvania   Normal Above     50    33  0.56  Above  Normal     55    37 3.
  Delaware       Normal Above     50    32  0.56  Above  Normal     55    26 3.33
  Maryland       Normal Above     52    38  0.56  Above  Normal     57    42 3.
  Virginia       Normal Above     57    40  0.48  Above  Normal     61    43 2.8
  North Carolina Normal Above     58    35  0.57  Above  Normal     62    38 3.40
  South Carolina Normal Normal    64    38  0.42  Above  Normal     67    41 2.51
*****************************************************************************
```

6-10 and 30-Day Long Range Outlook For the East (Figure 3)

(Figure 3 &4). Maps are more costly, $.17 for a current U.S. Cloud Cover map plus a U.S. Radar map. (Figure 2). I used a 1200 baud modem.

The documentation is good for basic program installation and configuration. The accompanying booklet (for version 4.0 and higher) has a step-by-step explanation of a sample data set supplied within the program by WeatherBank. This feature offers an excellent introduction to WeatherBrief products. It is followed by clear directions on how to access your own choice of weather items. The previous version booklet included an extensive glossary of weather terms plus a listing of weather stations and their codes for the forty-eight contiguous states and the District of Columbia. these two features were especially useful for schools. It would also be helpful to have a chart of all the three hundred-plus menu options available for selection. We have included the thirty items from the Main Selection Menu (Figure 5). Secondary selection menu items appear only on the display screen with each of the thirty Main Menu items.

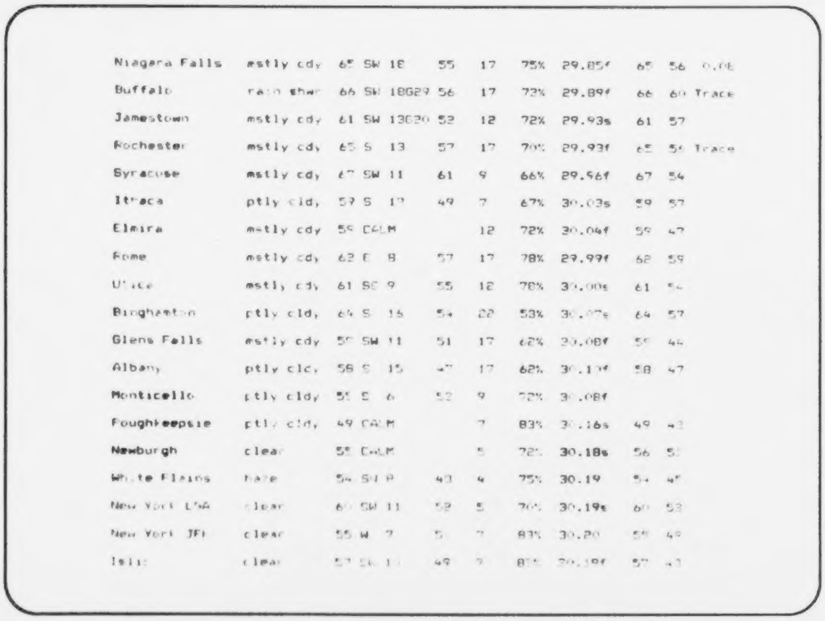
It is also possible to go directly online for the WEATHERBANK database for more detailed and customized weather information. The documentation provides a section listing the major interactive mode commands but for detailed information on each one, the user must access HELP screen while in the interactive mode. This, of course, costs money.

During the summer (1992) and updated version to 4.0 will be released with one significant improvement: state-by-state, high resolution radar maps. Currently there are only regional maps.

WEATHERBRIEF ia an excellent program for simple or sophisticated weather information for a wide range of needs. The program runs on an IBM or compatible personal computer, with at least 512K RAM, EGA or VGA graphics and a color display, one floppy and one hard drive with at least 3MB available storage and a modem. The cost of the program is $49.95 plus $3.50 shipping and handling. There is a $25 minimum deposit requirement to set up an account. New customers get ten minutes of free online time.

WEATHERBANK customer service is available at :801-530-3181 (Salt Lake City, Utah) 8AM-5PM Mt. Time, Mon-Fri.

WEATHERBANK, INC
5 Triad Center, Suite 315
Salt Lake City, Utah 84180



```
Niagara Falls   mstly cdy  65 SW 18     55   17   75%  29.85f   65  56  0.08
Buffalo         rain shwr  66 SW 18G29  56   17   72%  29.89f   66  60  Trace
Jamestown       mstly cdy  61 SW 13G20  52   12   72%  29.93s   61  57
Rochester       mstly cdy  65 S  13     57   17   70%  29.93f   65  56  Trace
Syracuse        mstly cdy  67 SW 11     61   9    66%  29.96f   67  54
Ithaca          ptly cldy  59 S  10     49   7    67%  30.03s   59  57
Elmira          mstly cdy  59 CALM           12   72%  30.04f   59  47
Rome            mstly cdy  62 E  8      57   17   78%  29.99f   62  59
Utica           mstly cdy  61 SE 9      55   12   78%  30.00s   61  54
Binghamton      ptly cldy  64 S  16     54   22   53%  30.07s   64  57
Glens Falls     mstly cdy  59 SW 11     51   17   62%  30.08f   59  44
Albany          ptly cldy  58 S  15     47   17   62%  30.10f   58  47
Monticello      ptly cldy  55 S  6      52   9    72%  30.08f
Poughkeepsie    ptly cldy  49 CALM           7    83%  30.16s   49  43
Newburgh        clear      55 CALM           5    72%  30.18s   56  53
White Plains    haze       54 SW 8      43   4    75%  30.19    54  45
New York LGA    clear      60 SW 11     52   5    70%  30.19s   60  53
New York JFK    clear      55 W  7      51   7    83%  30.20    59  49
Islip           clear      57 SW 10     49   7    83%  30.19f   57  43
```

Current Weather Conditions for New York (Figure 4)

CD-ROM: A Quantum Leap in Education

by RogerS. Hutchison, Ph.D., President, CD-ROM, Inc., Golden, CO

Definition and Capacity

CD-ROM, or compact disc read-only memory, is a storage medium capable of storing up to 760 megabytes (MB) of data on a 4.72 inch disc. This same size is the internal dimension of a floppy disk which holds a standard 360 kilobytes (KB) of information, or the newer 1.2 MB disks. Thus, CD-ROM discs, while the same physical size, can store over 2,000 standard floppy disks, or over 600 high-density floppies.

Just how much information is on a 0.7 ounce disc that can be mailed anywhere in the United States for about 50 cents? It is equivalent to 300,000 pages of data or text, or 70 hours of audio, or 240 minutes of full motion video or a combination of the three for the industry's newest buzz word "multi-media".

For the record, 300,000 pages of text (8 1/2" by 11" filled from top to bottom with no spaces), displaces 6 1/2 medium-sized trees. It is the equivalent of the world's largest dictionaries or set of encyclopedias. In fact, this storage is so vast as to be capable of placing 450 books on a single disc.

Current Applications

A recent article in the Journal of the American Medical Association cites the need for newer technologies to cope with today's information explosion (JAMA, Vol. 256, #24). Scientific information is currently doubling every five years and is expected to double every two years in the near future. This rate of growth, currently at over 6,000 scientific articles per day will force two immanent changes in tomorrow's scientists. First, no a surprise to anyone reading this article, there will be the increasing move towards specialization. What may be news, will be the incorporation of new technologies, such as CD-ROM, to process this information glut selectively.

CD-ROM, a viable technology for the past two years only, is currently making inroads to corporate America. Over 30 percent of all Fortune 1000 companies have CD-ROM projects in progress. Government agencies are finding that Congressional mandates calling for "paperless" offices lead straight into the optical realm. Educational institutions are amazed at the prospect of entire encyclopedias--currently available as eighteen volumes of books costing a few thousand dollars and requiring an entire bookshelf of space--in the form of a single CD-ROM disc holding not only text, not only images, but sound and video clips as well.

Other examples of current consumer products include discs on legal databases, economic databases, medical databases, as well as dictionaries of 12 languages on one disc, the National Geographic Mammals, Birds of North America and even one on the Encyclopedia of Zimbabwe. Want to find the fax number of anyone in North America? It's on a single disc. Want to find out who has a business doing the same thing you are doing? Over eight million businesses can be researched on one disc.

One very recent development project captures both the creative energy of the participants and the imagination of the audience. It's a CD-ROM disc about the culture, religion, language and history of the Navaho people. Such a project is currently underway, sponsored in part by some of the same people who developed the Joint Education Initiative project, also known as JEDI. The JEDI project is a collection of earth science information databases for use in secondary schools in the U.S. or other English-language countries. The second project, the Navaho JEDI, would take the original idea of creating an earth

continued on page 21

science database available to teachers and students alike and add information in multi-media form about the Navaho.

Recent communications also include insights from a man in Mexico using optical scanners to capture articles with political-and economic-based content appearing in Mexico's 82 newspapers and magazines. He is producing a CD-ROM disc quarterly for the general public, which costs several hundred dollars. It offers people interested in economic or political development in Latin America an unprecedented opportunity to research information both thoughly and selectively.

Future Applications

The future holds many exciting possibilities for CD-ROM. With a new development that permits full-motion video synchronized with sound on the "silver platter", we can now expect a full curriculum available to teachers in the 21st century. A teacher will walk into a classroom and bring out a disc with math lessons designed to provide instant feedback on the correctness of answers. The student will not be able to proceed without first accomplishing the tasks at hand. Psychologists say that with instant feedback, the retention levels of people increases from an average of 15 per cent to as high as 85 percent.

The technology of CD-ROM is both efficient and permanent. Unlike magnetic tapes that record information sequentially, CD-ROM and these other optical technologies can process information immediately. Commanded by regular computer commands the laser jumps to a section of the disc where the information resides. CD-ROM technology brings information, such as a particular quote from Shakespeare, to the screen in milliseconds instead of minutes. In addition, once the information is placed on the disc, it is stored permanently. It is not subject to erasure by a magnetic field or other electromagnetic interferences.

CD-ROM, due to its optically-based information processing system, can scan the entire contents of a 300,000-page document and find every reference to a particular value or word. For example, on one CD-ROM disc containing the complete works of Sherlock Holmes, typing the word "pipes," one sees in far less than a single second that Arthur Conan Doyle wrote this word 12 times in his entire life's work. A computer command to the CD- ROM to search not only the word "pipes," but also for the word "hats", finds hats mentioned 45 times in Holmes's writing, appearing five times in conjunction with the word pipes. In other contexts, this type of information processing can save companies significant time and money in processing.

The Future

The original Star Trek episode, now twenty-five years old, had an interesting program: a planet orbiting a sun which was becoming a supernova. There was only one person left on the planet when the now-famous Kirk and the equally-famous Spock visited: the caretaker of the library. And this library had thousands of small shiny discs resembling in every way today's CD-ROM discs. On these discs was the collective knowledge of a civilization.

Such a library containing multi-media information, recording all of mankind's scientific knowledge and available only for the asking, would offer the hungry student lessons in medicine, in chemistry, in math or even in soil mechanics.

CD-ROM offers this kind of a quantum leap in data capacity on a microcomputer. The single interface card required for the CD-ROM drive can be used to attach up to eight CD-ROM drives on each card and a total of twenty-four CD-ROM drives on a DOS based microcomputer. Recently, at the request of a Denver company that deals with massive databases for the U.S. Government, a system was designed to attach 64 CD-ROM drives on a microcomputer: this means that in 1991, sixty-four times 760 MB of data can be attached to a single microcomputer.

Summary

CD-ROM, and other optically based technologies, should be seriously exploited for today's researchers, and tomorrow's scientists. CD-ROM technology offers to today's educators a means to increase mankind's knowledge in a friendly environment. Indeed, we are witnessing a powerful technological leap that will change us from passive observers and consumers of information into interactive consumers of information. It represents a leap in education, along with a quantum leap in computer technology, and has strong implications for a technological society as well.

Center for Technology in Education K-12 Survey

The national Center for Technology in Education at Bank Street College is conducting a nationwide survey of teachers who use telecommunications systems for professional development and student learning. The Center is interested in surveying K-12 teachers and librarians/library media specialists who use bulletin boards, online commercial services, or online education services for a range of activities.

The survey will address five major questions:
What kind of telecommunications systems and what hardware set-ups are teachers using for professional development?
How and with whom are telecommunications systems being used?
What are the perceived effects of using telecommunications systems on teachers' professional development, teachers' teaching, and student's learning?
What are the barriers and incentives to using telecommunications?
Who are the teachers and schools using telecommunications systems?

If you are interested in being part of this survey, please write or call: Margaret Honey, Center of Technology in Education, Bank Street College, 610 West 112th, New York, NY 10025, 212/222-6700, ext 663, FAX: 212/932-1494 or send e-mail via Internet to:gxhoney@llwnet.linknet.com.

Sphinxes, diamonds...cont from page 17

file, by entering **FROM EACH** following the range specification of the **TYPE** or **DISPLAY** command. For example, To display the first two records from each file: Type S4/5/ 1-2 from each

To scan records from a specific file in OneSearch, enter the word FROM followed by the file numbers. For example: to display the first three records from File 715 (Christian Science Monitor):
Type S4/5/1-3 from 715

SEARCHING TIPS AND TECHNIQUES

Searches can be focused and limited in several ways to achieve retrieval with greater precision. Some of the major techniques particularly germane to Papers follow.

1) Limit The Search To Selected Newspapers

Retrieval can be restricted to selected newspapers by entering the sub-categories rather than the full collection of Papers. For example: to search topics of national or international importance, search the major U. S. newspapers: BEGIN **PAPERSMA**; to search topics of local interest in a particular area of the United States, search the regional Papers categories: BEGIN **PAPERSNE**; BEGIN **PAPERSSE**; BEGIN **PAPERSCE**; BEGIN **PAPERSWE**.

However, if your search in the full Papers collection results in an unmanageable number of "hits", limit further retrieval to the major newspapers (those with a circulation of 400,000 or more) by adding the suffix **/MAJPAPERS** to the search set (e. g. **SELECT S5/MAJPAPERS**). If the topic is one of highly localized interest, and the area is served by a major Metropolitan daily, either conduct the search in a single newspaper file (e. g. **BEGIN 631**), which limits the search to the **BOSTON GLOBE**); or, you can limit retrieval to a single newspaper within a category by **SELECT**ing the journal name search prefix (**JN=**) entry or the journal code (**JC=**) entry (e. g. **SELECT S5 AND JN=BOSTON GLOBE**; or, **SELECT S5 AND JC=BG**).

2) Limit The Search To Specific Sections of The Newspaper

There are "sections" common to all newspapers: Editorial, Financial, Business, Op-Ed, Arts and Books, Science, Sports, Travel, Real Estate, Letters, etc.. By using SECTION HEADING (SH) and DESCRIPTOR (DE) qualifiers, retrieval can be restricted to stories and articles that primarily deal with specific aspects of a subject. For example:

SELECT ETHICS?/DE AND SH=SPORTS; or,

SELECT ETHICS?/DE AND SPORTS/ SH

3) Increase Precision Through Liberal Use of Field Delimiters

One of the simplest ways to make full text searching more efficient is through the use of prefix and suffix field delimiters. Students find free-text searching in Papers almost intuitive, and the tactic of simply suffixing their search terms with field delimiters can help them avoid most of the pitfalls of full-text searching. Precision is greatly improved by limiting search terms to the Lead Paragraphs (**/LP**), the first two paragraphs which summarize the important aspects of a story, the Headline or Title (**/TI**), and Descriptor (**/DE**) fields. Specifying these delimiters usually will insure that the articles contain a "major discussion" of the topic.

4) Increase Precision Through Use of Proximity Operators

Be wary of the Boolean "AND." Its use with unqualified search terms in full text searching is tantamount to on-line suicide. The odds of search terms appearing somewhere in a full text article are high,- but unexpected combinations may result. The terms may appear completely out of context with each other. Knit the search terms together into the appropriate context through use of proximity operators. For the most precise search of the Text and Lead Paragraph fields, DIALOG advocates use of the proximity operators (**W**), (**N**), and (**S**). The (**W**) operator specifies adjacency and word order within the data field, the (**N**) operator specifies adjacency but not order, and the (**S**) operator specifies that terms occur within the same paragraph of text. For further refinement, a word adjacency feature allows you to specify the number of words that may appear between the search terms. For example, join words with (**#W**), or (**#N**).

5) Restrict Search by Size of Story

In most cases, for student research, retrieval of a limited number of **quality** articles is preferable to retrieval of a great number of short, repetitive articles, that outline the main issues and do not contribute any new information. To retrieve significant articles, specify the LENGTH of the article, to insure that they are long enough to provide sufficient, in-depth background information and analyses. Stories containing 1,000 or fewer words are retrieved using the **/SHORT** suffix; those containing over 1,000 words are retrieved with the **/LONG** suffix (e. g **SS S5/SHORT**; or **SS S5/LONG**)

(Note: The section of examples of student searches, that will be published in Part 2 in the next issue, illustrate many of the techniques discussed here)

To be continued next issue...

SIRS...continued from page10

with minimum 3mg free space, any type of monitor, CD-ROM drive with microsoft extensions of 2.0 or higher, DOS 3.0 or higher, printer is desired. A 30-day preview of the actual CD-ROM program is available upon request. 1-800-374-SIRS. SIRS Inc. P.O.Box 2348 Boca Raton, FL 33427-2348.

YOURS FOR THE ASKING *free material available upon request*

The materials (worksheets, curriculum units, software programs samples, etc.) are provided by librarians and teachers who have developed and used them successfully. They believe in sharing and encourage you to join us. The following are yours for the asking if you send a self-addressed stamped envelope to ***Information Searcher*** *,14 Hadden Road, Scarsdale, NY 10583*

Send a self addressed stamped ($1.25) 8 &1/2' by 11' envelope to receive copies of social studies or technology curriculum units developed by Keith Keyser at Marple Newtown High School. Keith has put together units for social studies, grades 3-7, 7-8, 6-12, 8ATP-9 and techonolgy, grades 9,9-10 Most of the units incorporate weather satellites and LandSat images and list numerous other resources. See page one article for a more complete explanation of the curriculum work being done at Marple Newtown School District.

Networking/Ames HS..continued from page 4

also fortunate to have access to community and regional services that allow students to locate the information found in a DIALOG search. One real advantage for our students is the presence of Iowa State University in our community, where students are welcome to use the University collection. They can access the Iowa State Library collection from our own Media Center Computer Lab so they know where the publication can be found before they go out to the university. Our students also use the Ames Public Library heavily. The Heartland Area Education Agency, which serves schools in central Iowa, is another regional resource that can be accessed by electronic mail and provides copies of magazine articles at a reasonable cost.

Textshow...continued from page 13

TEXTSHOW is a wonderfully creative program that youngsters will enjoy. They will think up many more applications that you imagine, and will have the patience to work up some musical surprises for you.

Readers can obtain their own copy of TEXTSHOW by sending $10 to TOM Rombouts, 535 Esplanade #502, Redondo Beach, CA 90277. (213) 543-3811. Hearing about my need to prevent access to DOS, Tom rewrote TEXTSHOW so that it cannot be interrupted with CTL-BREAK or CTL-C. Pressing ESC will stop a TEXTSHOW sequence and return control to calling menu or other program. Enjoy the program.

The Stacks...continued from page 13

roadworthy, have as high an octane rating or give school library media specialist as many miles per gallon as **CD-ROM Collection Builder's Toolkit** (1992). Read it. Ask vendors for preview privileges. Comparative shopping with Nicholls makes the final decision easier to make.

☐ Yes, I want to subscribe to *Information Searcher* for only $24.!

☐ Yes, RENEW my subscription at the same low price

That's $10 off the regular subscription price of $34!

Enclosed is my [ ]check for $________.

[ ]purchase order

Name ________________________________

School or Library Name ________________________

____

Send to my [ ] Home or [ ] Business Address

____________ ______________________

City ____________ State _____ Zip ____________

Business Phone ( ) __________ Home Phone ( ) __________

What online database services do you subscribe to?

[ ]BRS [ ]Dialog [ ] Dow Jones

[ ] NewsNet [ ]Vu/Text [ ]Wilsonline

[ ]Other, specify ______________

Do you have a CD-ROM drive? Yes No

What kind? ______________

How many CD-ROM discs do you have?

circle 1 2 3 4 5 6 more

*Add $5 outside U.S.

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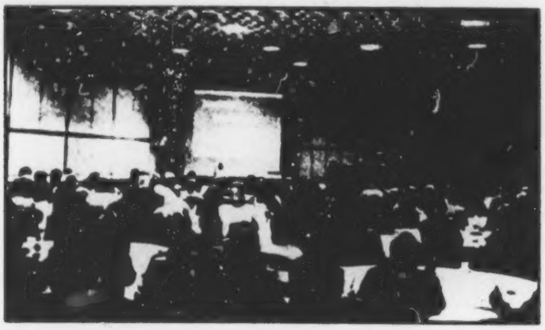

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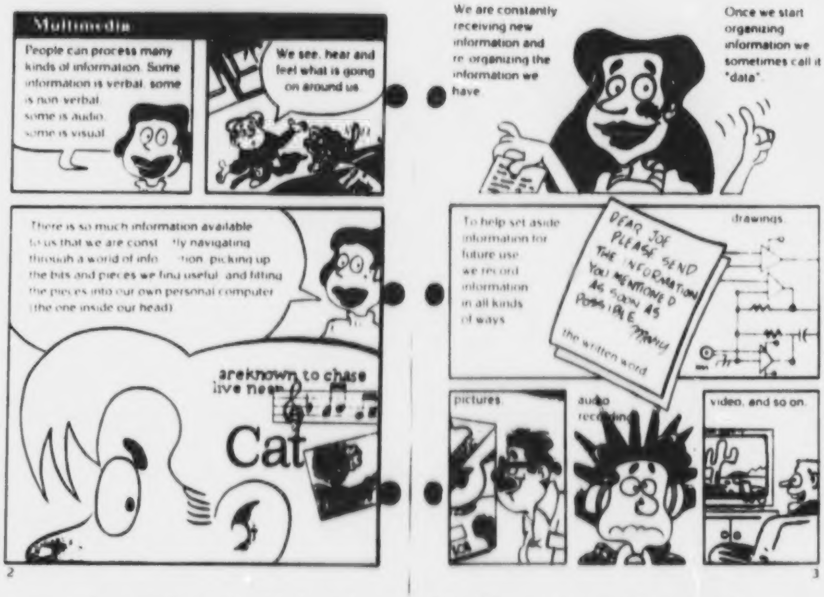
the newsletter for CD-ROM and online searching in schools *vol. 4, no. 3*

Multimedia : Changing the Way We Teach and Learn


Multimedia
People can process many kinds of information. Some information is verbal, some is non-verbal, some is audio, some is visual.
We see, hear and feel what is going on around us.
We are constantly receiving new information and re-organizing the information we have.
Once we start organizing information we sometimes call it "data".
There is so much information available to us that we are constantly navigating through a world of information, picking up the bits and pieces we find useful, and fitting the pieces into our own personal computer (the one inside our head).
are known to chase live neem
Cat
To help set aside information for future use we record information in all kinds of ways.
DEAR JOE PLEASE SEND THE INFORMATION YOU MENTIONED AS SOON AS POSSIBLE. ...
the written word
drawings.
pictures.
audio recording
video, and so on.
2
3

A page from the Linkway's user-friendly, cartoon-style manual

Multimedia in the Classroom
Hi-Tech Style

By Denise Shorey, Educational Technology Specialist, Agent, IBM ,CO

In the '70s media specialists learned to make and produce slide-tape shows with sound, using dissolve units and multiple slide projectors. The '80s came along and we equipped our schools with video camcorders and character generators. Slide-tape presentations developed by students and teachers become video productions. The '90s are here and it's once again time for change: multimedia productions on the personal computer.

If new buzz words and bandwagons are common in education, why is Multimedia commanding such attention? According to the Department of Defense, Multimedia training is 40% more efficient than traditional education methods; students using Multimedia demonstrated a 30% shorter learning curve and retain 30% more than students using traditional training methods.

All of us can remember the old adage about how much more effective seeing, hearing and doing things can be. Multimedia allows students to enhance their learning styles. More and more businesses require presentations of report results along with, or instead of, the traditional written report. Much of this is in response to the new learning skills brought about by stimuli such as TV, Sesame Street and MTV.

Any new technology brings with it new terminology, and along with it, confusion about meaning. Here are a few of the new terms and simple definitions. **Multimedia** is referred to as the integration of sound, pictures (both still and moving) and text in a computer driven product. **Hypermedia** is the non-linear approach to learning that allows students to obtain information from multiple access points in the same document. **LinkWay** is a simple and inexpensive hypermedia program available for PC's that allows creation of multimedia presentations: complete with sound, pictures and graphics in color and full motion video. Linkway is especially suited to the K-12 arena.

LinkWay, plain and simple

Multimedia productions on the computer can be very complex and require high-end machines to run them. It would be impossible to include all the multimedia programs available today in one article. Therefore, we will discuss a product that was developed for schools and can be used at all grade levels: Linkway.

IBM created Linkway for everyone to use. It is inexpensive and will run on any IBM computer, so the initial investment

continued on page 14

PROCESSING NOTES *from the Editor*

What's All the Hype?

Remember the word multimedia. It's the buzzword of the '90s. Very simply, it is the combination of text, graphics and sound. Placing the computer in control, it brings other technologies together to empower the user. Recently, the techno-gurus (like Microsoft) got together and came up with a standard for multimedia called MPC (multimedia personal computer). According to the MPC Council, the technology requires a minimum configuration, of at least a 386 computer with 30MG hard drive, 2MB RAM (4MB recommended), VGA (super VGA recommended), sound board and CD-ROM drive. IBM has developed their own standard, but that will be covered at another time.

Applications of multimedia abound. Reference sources, such as **Compton's Multimedia Encyclopedia,** show John F. Kennedy at his inauguration addressing the American people, "Ask not what your country can do for you, ask what you can do for your country," he intoned. Reading Kennedy's speech may be informative, but hearing it in his distinctive Boston twang is inspiring. IBM and National Geographic's **Mammals** contain over 700 full screen photographs, 600 pages of information and 45 full-motion video clips to motivate elementary students. **Guinness' Disc of World Records** and **TIME Magazine Compact Almanac** keep kids riveted to the task at hand.

Curriculum products like IBM's **Stories and More,** and Hyperglot's **Learn to Speak Spanish** motivate and involve students to learn. And finally, tools, such as LINKWAY and HYPERCARD, give students the power to create their own multimedia programs.

But does multimedia deserve all this hype? Will multimedia change how we do business in our libraries? Will it change the way we teach and learn?

YUP!

There is absolutely no question that this technology will change not only the school library collection, but the collectors and users as well. In whatever form it develops, multimedia will be in the forefront.

The CD-ROM industry, and especially multimedia along with it, is still in its infancy. Neither has even begun to come into its own. In an attempt to jump onto the bandwagon, some CD-ROM publishers are simply transferring print information onto disc with no added value. But during the next year or two, countless titles will be produced; many of these will be unique to this technology, not a carry over from print. We will, of course, be reviewing these with an emphasis on how students and faculty react to them and how they can be integrated into the curriculum.

Denise Shorey, a school librarian loaned to IBM, describes IBM's multimedia platform in the lead article. She gives some background in this new area, and introduces LINKWAY, a software program to create individual multimedia programs by combining graphics, text and sound in a non-linear manner.

Don't miss Roxanne Mendrinos's article on CD-ROM in school libraries. The facts she has collected about CD-ROM purchasing, integration and student use in Maine and Pennsylvania can help us to understand what's ahead and how to plan for it.

If you have ever dreamed of having a set of fully developed searches, demonstrating different strategies, with command and options to teach students and staff the basics, as well as the finer points of online searching - here it is! Lee Sapienza has chosen a unique group of topics, including, but not limited to, werewolves, diamonds and politics to illustrate the power of the PAPERS database. Part One of her article appeared in the last issue of the ***Information Searcher.*** When Lee writes an article, she always does it with great depth and detail, reflecting her dynamic experiences with students. I can never bring myself to cut one word, even when it this forces me to run the article over two issues. After reading Part Two, I'm sure you'll agree it was worth the wait!

Also, there a new kid in school, with a great idea. Bob Stoneham, a school librarian at Fairfax High School MD, took a class at George Mason University on searching Dialog. When I spoke to Anne Caputo, Manager of Dialog's Academic Programs and the instructor of the class, she mentioned how creative her students' online searching projects were. You can guess the rest of the scenario and check out the unit on page 20. By the way Anne, I hope he got an A.

Pam Berger

MAIN MENU

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Knights, Chivalry and Dialog: A Winning Combination

by Barbara Grabowski, Chair, Library Media Dept,Lyons Township High School, Western Springs, IL

At the South Campus of Lyons Township High School, a large comprehensive high school in suburban Chicago, integration of Dialog's Classmate Program into the curriculum, has been received with enthusiasm and excitement by students and faculty. It has provided valuable instructional support for a variety of courses across a broad curricular spectrum.

Students in the Home Economics Department's Child Development class doing research on birth defects used several different databases to locate material on specific and difficult-to-find diseases. Students searched traditional resources first and learned how online searching expands the holdings of their high school library.

Three English classes studying King Arthur tied medieval history to modern day re-enactments of tournaments and jousts using online newspapers databases that described medieval fairs and festivals. During the research phase of this project the students actually taught each other Classmate using cooperative learning techniques.

The truest testimonial by students using Classmate for class projects has been their subsequent return to the Library Media Center and their preference for Classmate as the first source for other research.

In addition to the ongoing Classmate projects, during a curriculum workshop last summer, plans were formulated to use Classmate as the primary information source to research environmental issues in the Global Relations classes of the Social Studies Department.

The faculty has been encouraged to investigate curricular uses of Classmate. Networking groups organized by the Staff Development Committee provide an opportunity for faculty members, including Library Media Department staff, to share their experiences of successful teaching strategies and curriculum projects. Faculty members have been encouraged to look for possible uses of Classmate for their particular disciplines and to create several extra "hands-on" demonstrations showing how Classmate works. Library staff members attended workshops at DIALOG headquarters in Chicago and attended those given by Suburban Library System.

For the 1991-92 school year, the Staff Development Committee, which oversees and guides professional growth on all-school initiatives, adopted the following initiatives for particular emphasis: reading across the curriculum, writing across the curriculum, and learning through new technologies. In addition to these the Committee supports the previously established incentives of cooperative learning, mastery learning, and critical thinking, all of which may successfully be accomplished by curricular activities using online searching. Successful searching skills become instrumental as teaching/learning techniques for all of these initiatives.

Lyons Township High School provides summer workshops for faculty to create and enhance curriculum. Faculty members submit proposals for such workshops to the Curriculum Director and, if approved, are reimbursed for their participation. Both the King Arthur and global relations curriculum workshops were the result of recent (1990 and 1991) curriculum workshops implemented by cross-departmental teams of library media specialist and faculty members.

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Networking...continued from page 3

During the first day of the King Arthur unit students are introduced to the many medieval characters they may choose to gather information for a report. In 35 minutes, using a videotape and exercise sheets, the librarian explains the capabilities of DIALOG and Knowledge Index. Strategies for successful online searches are identified and practiced. The need for similar strategies to use with indices in texts and encyclopedias is also examined. Students choose a character and then enter a research support group.

On day two, with the help of a librarian, students in each group "master" a specific resource skill by using an Expert Sheet. An Expert Sheet is prepared for each resource area: card catalog/indices, encyclopedia indices, and Dialog/Knowledge Index.

During the third day, newly created students-experts teach the other two members of their "triad" the mastered resource,which takes about 20 minutes per resource. Tutorees within each group fill out additional Expert Sheets for each new resource they are taught by group members.

On the fourth day, groups review their knowledge of "new" resources strategies. In a staggered start, each group is given a poster and travels together, filling it out fully and correctly.

On day five, students begin individually researching their characters for "project persona." They utilize their newly acquired skills and technological familiarity. The original triads are involved in supporting the individual research.

The schedule for the global relations project is as follows:

Day 1:Brainstorm environmental issues in the classroom using the "What do you know? What would you like to know?" critical thinking format. Student then receives an explanation of the assignment.

Day 2: Read an article on an environmental issue (25 minutes). The librarian introduces search strategies involved in Dialog activities, and the class views a videotape on Dialog (20 minutes). Students learn to use various descriptors or synonyms in preparing to research their topics. (in library)

Day 3: Class is divided into groups of four/five and is guided through an actual research process by the librarians. While approximately half the class trains on the Dialog computer, the other half researches on Infotrac, Readers' Guide and Readers' Guide Abstracts. (in library)

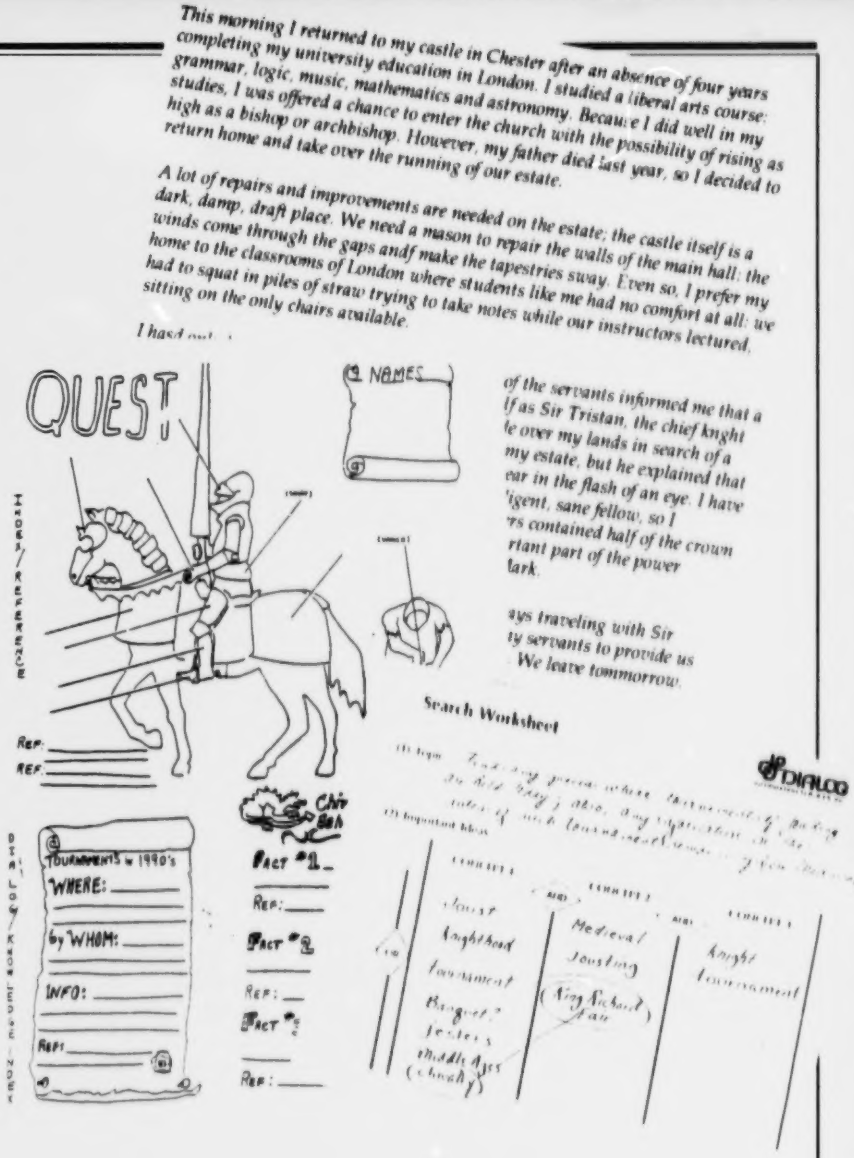
Day 4: Groups continue with individual researching using Dialog, Infotrac, Readers' Guide and Readers' Guide Abstracts. During this process, groups keep a research log (in library)

Day 5: Continuation of research, group planning (in library)

Day 6: In-class planning

Day 7,8,9: Group presentations ☐

Editor's Note
*See **Yours For the Asking** column on page 13 for information on how to receive copies of the curriculum units described in this article.*



This morning I returned to my castle in Chester after an absence of four years completing my university education in London. I studied a liberal arts course: grammar, logic, music, mathematics and astronomy. Because I did well in my studies, I was offered a chance to enter the church with the possibility of rising as high as a bishop or archbishop. However, my father died last year, so I decided to return home and take over the running of our estate.

A lot of repairs and improvements are needed on the estate; the castle itself is a dark, damp, draft place. We need a mason to repair the walls of the main hall; the winds come through the gaps andf make the tapestries sway. Even so, I prefer my home to the classrooms of London where students like me had no comfort at all: we had to squat in piles of straw trying to take notes while our instructors lectured, sitting on the only chairs available.

I hasd out

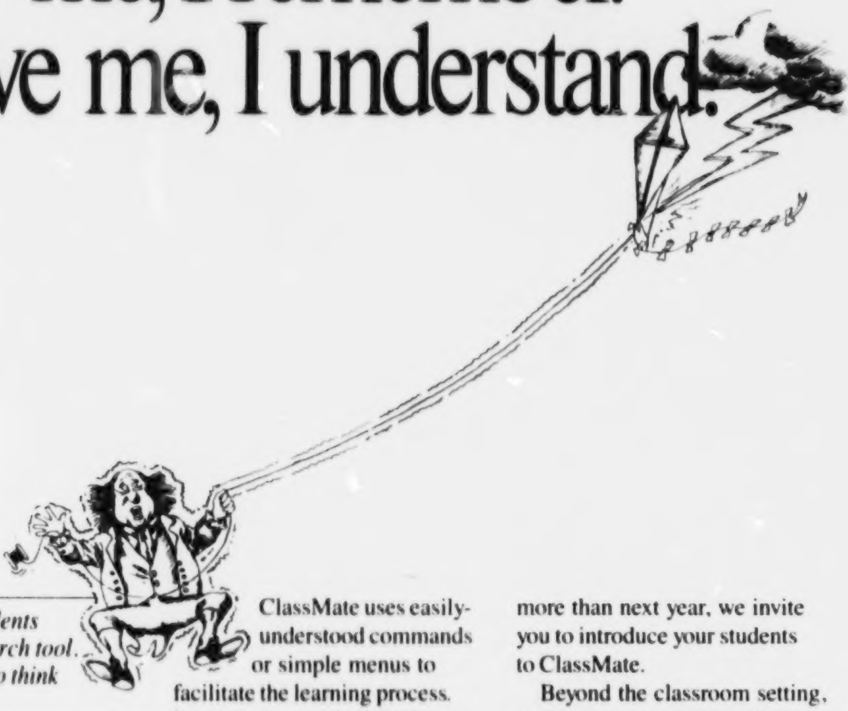
of the servants informed me that a
lf as Sir Tristan, the chief knght
le over my lands in search of a
my estate, but he explained that
ear in the flash of an eye. I have
'igent, sane fellow, so I
'rs contained half of the crown
rtant part of the power
lark.

ays traveling with Sir
ty servants to provide us
We leave tommorrow.

Sample pages from "Project Persona" curriculum research unit

Tell me, I forget. Show me, I remember. Involve me, I understand.

Ancient Proverb



Give your students more than a research tool. Give them a way to think for a lifetime.

"Go fly a kite."

That's how Benjamin Franklin might have encouraged the students of his day to better understand the relationship between lightning and electricity.

If he were around today, he could simply direct them to ClassMate.℠

ClassMate from Dialog is the very affordable, computerized research program designed to introduce students to the vast information sources available through online database searching.

ClassMate uses easily-understood commands or simple menus to facilitate the learning process. It encourages critical thinking skills while developing in students the ability to confront research problems logically.

ClassMate provides students and their teachers access to over 95 important databases providing volumes of information in the scientific, medical, social science, and business areas (including major newspapers).

ClassMate is supported by a student workbook, a teaching guide, a videotape, and many other valuable learning materials.

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Beyond the classroom setting, students can continue exploring Dialog's vast information sources with Knowledge Index,® the commercial version of Classmate (available after hours—evenings and weekends).

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DIALOG ClassMate

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SPINXES, DIAMONDS AND WEREWOLVES

To illustrate search techniques outlined in Part I of this article, I have selected some examples of students' online sessions in Papers. These examples were chosen not because they were difficult to search, but because they do illustrate many of the features that Dialog has provided to make life on-line productive and enjoyable, and mostly because they are wonderful illustrations of how much fun and fascination, as well as information, there is in searching newspapers online!

Lee Sapienza, Librarian
Wayland High School, Wayland,MA

Editor's Note: This is Part II of an article on the PAPERS Database. Part I, which was published in the preceeding issue of Information Searcher (Vol 4, No.2) explained the organization, categories, and contents of the database and gave suggestions for its use in a high school program.

THE RIDDLE OF THE SPHINX

SEARCH: Jyl needed to find historical background information on the Great Sphinx. Precautions had to be taken to avoid retrieval of articles which concentrated on the details of the restoration process rather than on Egyptology, historical fact or legend.

The possibility of "false drops" loomed large in this search. Without even trying, articles galore can be retrieved whose only relevance to the search topic exists as a passing reference, phrases such as " with the silence of the Sphinx" or "as unreadable as the Sphinx." Such similes have come into common usage in the language. Even field-delimited free-text searching, particularly in the lead paragraph field, would be risky.

RETRIEVAL: The solution to both the above problems lay in searching for the topic of the Sphinx with suffix delimiters, so that the term (truncated to retrieve variants) had to appear either in the title, lead paragraph, or descriptor fields (SPHINX?/TI,LP,DE). Then Jyl combined this term with a variety of concepts (synonyms) that described the broad general category that encompassed research on the sphinx. These terms were all searched as descriptors, thereby limiting retrieval to those articles in which there was significant information

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FIGURE 1:

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?SS SPHINX/TI,LP,DE AND (EGYPT? OR ANTIQUITIES OR ARCHEOLOGY OR
 MONUMENT? OR RESEARCH OR HISTORY)/DE

    S1        623 SPHINX/TI,LP,DE
    S2       4703 EGYPT?/DE
    S3        439 ANTIQUITIES/DE
    S4       2033 ARCHEOLOGY/DE
    S5        910 MONUMENT?/DE
    S6      47197 RESEARCH/DE
    S7      98953 HISTORY/DE
    S8            152 SPHINX/TI,LP,DE AND (EGYPT? OR ANTIQUITIES OR
ARCHEOLOGY  OR MONUMENT? OR RESEARCH OR HISTORY)/DE

?SS S8/MAJPAPERS

   S9          65 S8/MAJPAPERS

?SS S9/LONG

   S10          9 S9/LONG
?T 10/TI,SO,WD/1 FROM EACH

 10/TI,SO,WD/6    (Item 1 from file: 631)
LUXOR ETCHED IN STONE, EGYPT'S ANCIENT MAJESTY ECHOES
THROUGH THE AGES
Boston Globe (Bg) - Sunday October 23, 1988
Word Count: 1,877

 10/TI,SO,WD/7    (Item 1 from file: 638)
ANTIQUITIES A NEW RIDDLE FOR EGYPT
Newsday (Nd) - Tuesday - June 28, 1988
Word Count: 1,232

 10/TI,SO,WD/9   (Item 1 from file: 703)
THE LATEST MYSTERY OF THE SPHINX: HIS AGE
USA Today (US) - Thursday October 10, 1991
Word Count: 1,157
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WAS SHE ANASTASIA?

The mystery of the Grand Duchess Anastasia, the youngest daughter of Nicholas II, the last of the Romanov Tsars, has become a subject of periodical popular conjecture and publicity - and, as any high school media specialist can tell you - a perenially-favorite topic for research papers. The massacre of Nicholas, his wife, and five children, during the Bolshevik Revolution, put a bloody end to Imperial Russia in 1918 - but not to the line of claimants to the Romanov title. The most famous of these was Anna Anderson, who claimed to be the Czarina Anastasia, sole survivor and rightful heir to the Romanov crown and fortune.

SEARCH: For his Modern World History project, Joseph had spent weeks researching books and magazines, in an attempt to ascertain the final disposition of Anderson's claim to the royal title. He had been frustratingly mired in unsubstantiated information from reviews of the fictionalized movie and stage plays on the subject. Thanks to the openness of Glasnost, formerly-suppressed reports of discoveries concerning this episode in Russian history had started to appear in Pravda in 1989 and were promptly echoed in the American press. By the time he went on-line, Joseph had his paper well underway and had to rewrite his conclusions after he found extensive reports in the Papers collection on the 1979 unearthing of the mass grave of Nicholas and his family. Although scientific investigation was still in progress, one of the skulls was tentatively identified as that of Anastasia - thereby discounting Anna Anderson's claim. The West German courts had rejected Anderson's suit as far back as 1970. However, the decision did not dispel the mystery for the friends and followers of the Russian royal family - or for the media.

Figure 2

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?SS (DUCHESS (2N) ANASTASIA OR ANNA (2N) ANDERSON) AND (HISTORY OR
     USSR OR SOVIET UNION OR RUSSIA)/DE

    S1        7436  DUCHESS
    S2        3481  ANASTASIA
    S3          53     DUCHESS(2N)ANASTASIA
    S4       62685  ANNA
    S5      221515   ANDERSON
    S6         194     ANNA(2N)ANDERSON
    S7       98953   HISTORY/DE
    S8       59222   USSR/DE
    S9        36846   SOVIET UNION/DE
   S10        4366   RUSSIA/DE
   S11           9      (DUCHESS (2N) ANASTASIA OR ANNA (2N) ANDERSON)
                 AND   (HISTORY OR USSR OR SOVIET UNION OR RUSSIA)/DE

?SS  S11/LONG

   S12              5  S11/LONG

 12/TI,SO,WD/1
FASCINATION WITH THE CZAR OUTLASTED THE REVOLUTION
Sacramento Bee  (SB)  - SATURDAY   July 20, 1991
Word Count:  1,057

 12/TI,SO,WD/3
ROYAL REVELATIONS; WILL A SOVIET WRITER'S DISCOVERY PUT THE
MYSTERY OF THE  FINAL CZAR TO REST?
Chicago Tribune  (CT) -  May 14, 1989
Word Count:  1,937

 12/TI,SO,WD/5
SOVIET MAGAZINE SAYS ANASTASIA DIED WITH ROYAL FAMILY IN EXECU-
TION
Richmond News Leader  (VA) - MONDAY   May 22, 1989
Word Count:  1,071
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RETRIEVAL: The main problem for this search stemmed from the popularity of its subject matter. The media is filled with reviews of books, movies, videos, and stage plays based on the Anastasia enigma. One can literally be deluged in irrelevance unless care is taken to focus and limit the search to articles that deal with factual and historic accounts. **It is a challenge to search for subjects in the descriptor fields of newspaper files**. The indexing is very superficial, at best. The idea of "controlled vocabulary" in these files consists of very broad, **nondescript descriptors**, with no consistency from one newspaper to another. Some papers have no descriptors at all! The only salvaging point in this regard is that **searching newspapers is intuitive!** After a while, a sixth sense develops.

Joseph decided to use the simple term **history** as one of the descriptors, and various forms of the country's name **(USSR, RUSSIA, SOVIET UNION),** holding in the wings, terms such as *murder, executions, and Czar Nicholas* - to use as needed. Although, we did

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THE ILL-FATED DIAMOND

According to legend, the Hope Diamond was pried from the forehead of an Indian idol worshipped by followers of Rama Sita in a Brahmin Temple. The god supposedly placed an everlasting curse on the gem, ensuring that tragedy would befall anyone who subsequently owned or wore it.

Captivated by the sensationalism of the legend, Suzie, a student in the Middle School, had chosen the Hope Diamond as the topic for her paper. However, she was quickly frustrated by the lack of printed resources. For example, the **Encyclopaedia Britannica** sports a whole two-inch paragraph on the topic. She visited the High School library with "hopes" (pun unintentional). We located another paragraph or two in books on gems and jewelry, another in books on myths and superstitions - and that was it.

Online to the rescue! We are now dealing with a subject whose roots are embedded in Hindu antiquity, whose history proceeded through the French royal courts, and thence to present-day America. **And our solution to this research question arrived in the form of twentieth century electronic newspapers!**

SEARCH: We started with a search in Reader's Guide Abstracts on the CD-ROM and discovered that in 1990 the fabled diamond was worn (despite the curse) by Georgette Mosbacher, wife of the Commerce Secretary, to publicize a one million dollar gift to the Smithsonian's Museum of Natural History, where the gem is on permanent display. The event made all the major news wires, with journalists recounting the history and background of the legendary stone in detail. Only that one reference! So off we went to the online Papers.

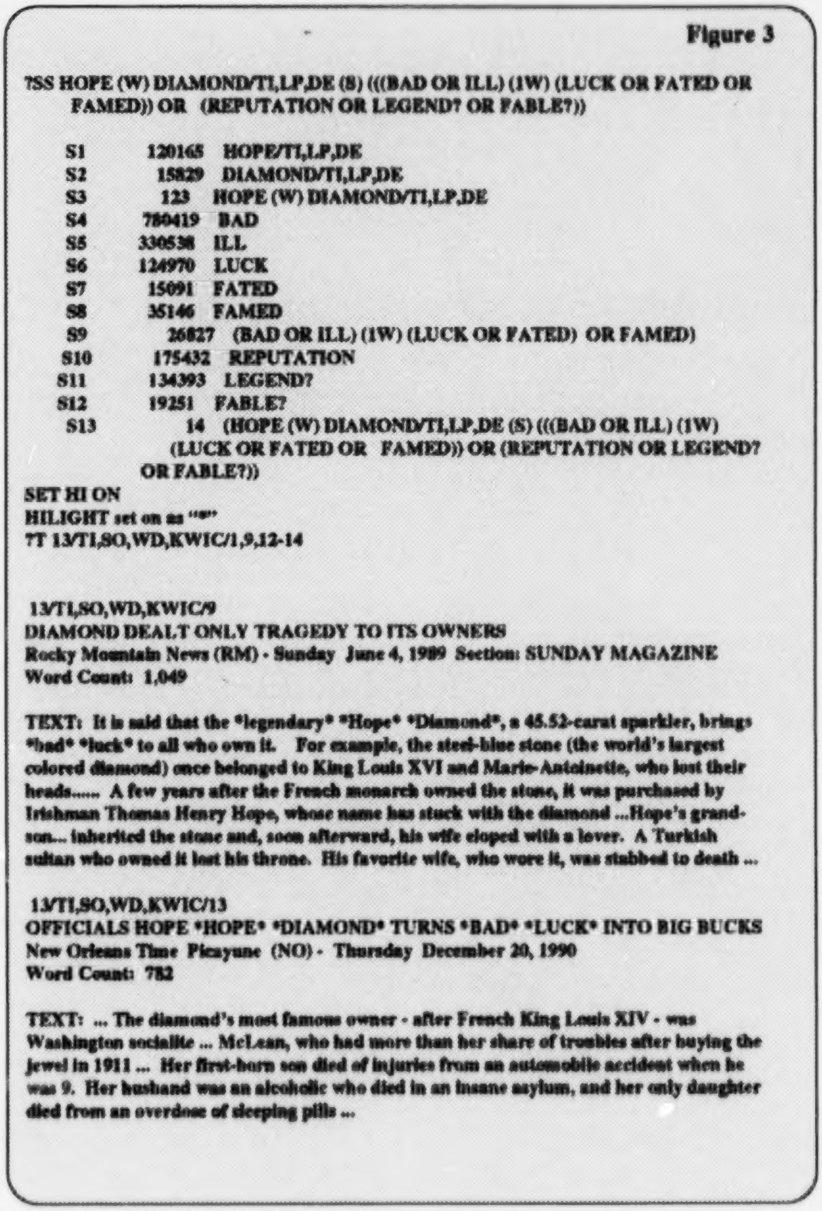

Figure 3

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?SS HOPE (W) DIAMOND/TI,LP,DE (S) (((BAD OR ILL) (1W) (LUCK OR FATED OR
     FAMED)) OR  (REPUTATION OR LEGEND? OR FABLE?))

     S1       120165  HOPE/TI,LP,DE
     S2        15829  DIAMOND/TI,LP,DE
     S3          123  HOPE (W) DIAMOND/TI,LP,DE
     S4       780419  BAD
     S5       330538  ILL
     S6       124970  LUCK
     S7        15091  FATED
     S8        35146  FAMED
     S9        26827  (BAD OR ILL) (1W) (LUCK OR FATED)  OR FAMED)
    S10       175432  REPUTATION
    S11       134393  LEGEND?
    S12        19251  FABLE?
    S13           14  (HOPE (W) DIAMOND/TI,LP,DE (S) (((BAD OR ILL) (1W)
                      (LUCK OR FATED OR   FAMED)) OR (REPUTATION OR LEGEND?
                  OR FABLE?))
SET HI ON
HILIGHT set on as "*"
?T 13/TI,SO,WD,KWIC/1,9,12-14


 13/TI,SO,WD,KWIC/9
DIAMOND DEALT ONLY TRAGEDY TO ITS OWNERS
Rocky Mountain News (RM) - Sunday  June 4, 1989  Section: SUNDAY MAGAZINE
Word Count:  1,049

TEXT:  It is said that the *legendary* *Hope* *Diamond*, a 45.52-carat sparkler, brings
*bad* *luck* to all who own it.   For example, the steel-blue stone (the world's largest
colored diamond) once belonged to King Louis XVI and Marie-Antoinette, who lost their
heads......  A few years after the French monarch owned the stone, it was purchased by
Irishman Thomas Henry Hope, whose name has stuck with the diamond ...Hope's grand-
son... inherited the stone and, soon afterward, his wife eloped with a lover.  A Turkish
sultan who owned it lost his throne.  His favorite wife, who wore it, was stabbed to death ...

 13/TI,SO,WD,KWIC/13
OFFICIALS HOPE *HOPE* *DIAMOND* TURNS *BAD* *LUCK* INTO BIG BUCKS
New Orleans Time  Picayune  (NO) -  Thursday  December 20, 1990
Word Count:  782

TEXT:  ... The diamond's most famous owner - after French King Louis XIV - was
Washington socialite ... McLean, who had more than her share of troubles after buying the
jewel in 1911 ...  Her first-born son died of injuries from an automobile accident when he
was 9.  Her husband was an alcoholic who died in an insane asylum, and her only daughter
died from an overdose of sleeping pills ...
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Papers was a veritable bonanza! Suzie voraciously followed the thoroughly-detailed story of the diamond across history. She discovered that the first instance indicating the curse might be effective came when the stolen gem was smuggled into Paris by Jean Baptiste Cartier, who later was torn to pieces by wild dogs in Russia. As part of the French crown jewels, the diamond belonged to King Louis XVI and Marie Antoinette, who lost their heads and gave further credence to the legendary curse. Later inheritors and owners of the stone eventually fell under its curse - Needless to say, Suzie's paper was a success and **DIALOG won another convert!**

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SPORTS SLEAZE

With its daily updating, you can't beat the Papers for currency. Each spring, students from the Middle School go on a "Washington Trip" to see the government in action. Prior to their trip, during the first week of April, several of the students visited the High School to go on-line for information about the Knight Foundation Commission Report on Intercollegiate Athletics, which had just been issued in mid-March. The Commission had legislative sponsorship, and the class adviser thought that a Congressional investigation into the reform of college sports was an issue that his young students could easily comprehend.

The group went on-line as a team to find an analysis of the Report and the Panel's main recommendations for the reform of collegiate athletics and the restoration of academic and financial integrity to the sports programs of the nation's colleges and universities. Again, the **recency** of information in Papers saved us. The REPORT had been issued less than two weeks prior, and had not yet been recognized in the magazine literature. A recent Bill Moyer's telecast about the Commission's probe into college sports misconduct was the extent of media coverage. So - into the Papers we went.

SEARCH: Even with field delimiters, entering a phrase like **college sports** into the megafiles of Papers is like jumping into the middle of the Pacific without a life preserver. Even combining **college sports** with other terms, such as **violations** or **abuses,** would still produce voluminous retrieval of articles describing the issue of sports misconduct, but what the Middle School youngsters needed was an analysis of the specific Commission's **final** report on collegiate sports ethics and the reaction of the NCAA and its member institutions to its proposed reforms.

Figure 4

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?SS KNIGHT (2W) COMMISSION/TI,LP,DE

     S1          6898  KNIGHT/TI,LP,DE
     S2        102183  COMMISSION/TI,LP,DE
     S3            68    KNIGHT (2W) COMMISSION/TI,LP,DE
?SS S3 AND SH=SPORTS AND PD=9103??

     S4            68  S3
     S5        745973  SH=SPORTS
     S6         66100  PD=9103??
     S7            27    S3 AND SH=SPORTS AND PD=9103??
?SS S7 AND (REFORM? OR RECOMMENDATION? OR REPORT?)/TI

     S8            27  S7
     S9         10867  REFORM?/TI
    S10           542    RECOMMENDATION?/TI
    S11         78710  REPORT?/TI
    S12            14  S7 AND (REFORM? OR RECOMMENDATION? OR RE-
PORT?)/TI

?T 12/TI,SO,WD/1 FROM EACH

 12/TI,SO/1          (Item 1 from file: 146)
KNIGHT COMMISSION RECOMMENDATIONS.
The Washington Post, March 20, 1991 FINAL Edition
Section: Sports, p. c01

12/TI,SO/6          (Item 1 from file: 632)
KNIGHT REPORT GETS MIXED REVIEWS ON CAMPUSES
Chicago Tribune (CT) Wednesday March 20, 1991
Edition: North Sports Final    Section: Sports    Page: 1

12/TI,SO/9          (Item 1 from file: 638)
CAMPUS REFORM URGED REPORT: SEPARATE SLEAZE AND SPORTS
Newsday (ND) Wednesday March 20, 1991
Edition: Nassau    Section: Sports, p. 136

12/TI,SO/10          (Item 1 from file: 640)
KNIGHT REPORT: HOPE FOR COLLEGIATE REFORM COMMEN-
TARY
San Francisco Chronicle (SF)  Wednesday  March 20, 1991
Edition: Three Star   Section: Sports, p. D1

12/TI,SO/12          (Item 1 from file: 703)
REPORT: ABUSE STAINS COLLEGE SPORTS
USA Today (US) - Wednesday March 20, 1991
Edition: Final    Section: Sports, p. 01C
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Once the youngsters grasped the distinction, we went into a huddle to plan our strategy and emerged with the following solution. Since the name of the investigatory Panel was specific enough to narrow the focus, we would search on the Commission's name (even though we were not sure of its official form) and restrict retrieval to the **SPORTS SECTION** of each paper. (It was not likely that there would be more than one commission with the proper name KNIGHT investigating college sports. We would also limit the search by date to eliminate retrieval of

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AMERICA 2000 - THE PRESIDENT'S VISION FOR EDUCATION

Figure 5

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?SS  AMERICA (W) 2000/TI,LP,DE

     S1      122727   AMERICA/TI,LP,DE
     S2        6452   2000/TI,LP,DE
     S3          56    AMERICA (W)2000/TI,LP,DE
?SS S3 AND (PD=910419 OR PD=91042?)

     S4          56   S3
     S5        2235    PD=910419
     S6       21074    PD=91042?
      S7         16       S3 AND (PD=910419 OR PD=91042?)
?SS S7 AND BUSH?/TI,DE

     S8          16   S7
      S9      43031    BUSH?/TI,DE
     S10         12    S7 AND BUSH?/TI,DE

?T 10/TI,SO

 10/TI,SO/3           (Item 3 from file: 630)
BUSH DETAILS SWEEPING PLAN TO 'REINVENT' U.S. EDUCATION
The Los Angeles Times (LT) - Friday April 19, 1991

10/TI,SO/9           (Item 1 from file: 633)
BUSH'S SCHOOL PLAN MAY INVITE QUICK SKEPTICISM, BUT IT'S
MORE THAN PLATITUDES
Philadelphia Inquirer (PI)  Monday  April 29, 1991

10/TI,SO/11           (Item 2 from file: 638)
BUSH'S BLUEPRINT FOR EDUCATION
Newsday (ND)  Friday, April 19, 1991

10/TI,SO/12           (Item 1 from file: 715)
EXPERTS SCRUTINIZE BUSH'S EDUCATION REFORM PACKAGE
Christian Science Monitor (CH) - Monday, April 22, 1991
```

SEARCH: In the process of designing an ideal school for her English class, Kathy ran a search on President Bush's educational reform package, **AMERICA 2000.** She needed to find information on the the main elements of his proposal and the tenor of the nation's response, from the viewpoint of both the general public and political quarters. With this background she could then decide whether Bush's educational blueprint should be a starting-point for her ideal school. She also had to investigate Governor Weld's spin-off plan for school reform, **MASSACHUSETTS 2000,** since it would directly affect the home state. Kathy started in PAPERSMA (the major newspapers).

The Bush proposal was issued in April 1991, and that would be the time period in which to direct the search, since the newspapers would have given it thorough discussion and analyses immediately upon its appearance. The papers would be filled with editorials and opinions representing all sectors of the U. S. populace, from political allies and foes, from educators, and from the nation's grass roots. And best of all, the main points of his package would be discussed and analyzed in detail..

RETRIEVAL: Since the concept of America 2000 has been widely publicized across the continent, and its title adapted by various governors to label reform programs for their own states, Kathy decided that, if date qualifiers were added, the name was specific enough on which to search. She decided that the most profitable time period would range from the day Bush presented his package, April 19, through the remainder of April.

Kathy first searched for the phrase (AMERICA (W) 2000) in the title, lead paragraph, and descriptor fields (Figure 5). She then ANDed the resulting 56 items in (set 3) to the prefix search field for the appropriate dates in April (PD=910419, the date Bush revealed his plan), and then dates for the rest of the month. Kathy tightened retrieval even more by combining the resulting sixteen items with the name of BUSH in the title or descriptor fields. The final **set 7** held twelve very **precise** hits. A selection of them are shown here in user-defined format of Title (TI) and Source (SO).

Kathy saved her search at this point. To get data on the reaction from different areas of the nation, she could then cycle through each of the regional sub-categories of Papers simply by issuing the command BEGIN PAPERSNE; BEGIN PAPERSSE; etc., and execute the search in each group of newspapers without the need for rekeying. ❑

MASSACHUSETTS 2000 - GOVERNOR WELD'S VISION

For her class project, Kathy also had to locate the substance of Governor William Weld's educational reform proposals, **MASSACHUSETTS 2000.** Fortunately, a major metropolitan daily for the area does exist in the BOSTON GLOBE, the obvious file for Kathy's search.

SEARCH & RETRIEVAL: Kathy tried to adapt the previous search strategy to find Weld's interpretation for the state, but very quickly discovered that **MASSACHUSETTS 2000** encompassed not only the education plan but other areas of state need, such as mass transportation and the Harbor Tunnel projects. Therefore, a search on the name alone was retrieving irrelevancies. The strategy of **AND**ing **MASSACHUSETTS 2000** with (EDUCATION or SCHOOL) in the descriptor fields reduced recall to three items. This was too restrictive. So Kathy **O**red the two concepts to achieve RECALL, and then introduced other qualifying factors to increase PRECISION (Figure 6). The 8401 citations retrieved in (set 6) were very quickly reduced when Kathy's next statement combined the set with a search for Weld's name in either the title (/TI) or descriptor (/DE) fields. **Set 14** now held 102 items. Weld had announced his plan in October of 1991. So using the same strategy as in the **America 2000** search, Kathy **AND**ed a prefix DATE qualifier. Kathy had retrieved eleven very precise citations. By using the suffix delimiter (/LONG) she downloaded only those articles having over 1000 words - those would give her a significant analyses of Weld's education plan. The final **set 11** consisted of five articles. (shown here in a user-defined format of title, source, and word count). ❑

Figure 6

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?SS  MASSACHUSETTS (W) 2000/TI,LP,DE OR (EDUCATION? OR
SCHOOL?)/DE

      S1         61649  MASSACHUSETTS/TI,LP,DE
      S2          1898  2000/TI,LP,DE
      S3             6  MASSACHUSETTS/TI,LP/DE(W) 2000/TI,LP,DE
      S4          4350  EDUCATION?/DE
      S5          5241  SCHOOL?/DE
      S6          8401  (MASSACHUSETTS (W) 2000)/TI,LP,DE OR (EDU-
CATION? OR
                        SCHOOL?)/DE
?SS S6 AND WELD?/TI,DE

                  8401  S6
      S7          1716  WELD?/TI,DE
      S8           102  S6 AND WELD?/TI,DE
?SS S8 AND PD=9110??

                   102  S8
      S9          4575  PD=9110??
      S10           11  S8 AND PD=9110??
?SS S10/LONG

      S11            5  S10/LONG

?T 10/TI,SO,WD/ALL

10/TI,SO,WD/1
IN MALDEN, NO A'S FOR SCHOOL PLAN
Boston Globe (BG)  -  Sunday, October 27, 1991
Word Count: 1,374

10/TI,SO,WD/2
EDUCATORS SEE NO BONANZA IN WELD AID PLAN
Boston Globe (BG)  -  Sunday, October 27, 1991
Word Count: 1,438

10/TI,SO,WD/3
WELD UNVEILS PLAN TO REVAMP EDUCATION
Boston Globe (BG)  -  Friday, October 25, 1991
Word Count: 1,322

10/TI,SO,WD/4
WELD TO URGE EDUCATION OVERHAUL
Boston Globe (BG)  -  Wednesday, October 23, 1991
Word Count: 1,188
```

PORPHYRIA -- OR -- WEREWOLVES AT LOG-ON

The unit on genetic engineering for freshman honors biology students is an exciting project. Of personal interest to some and general interest to all, this online unit is a hit year after year with students and teachers. And each year, the online databases reward us with some of the most unbelievably fascinating discoveries that makes online searching an exciting adventure. One year it was nanotechnology (the science of infinitesimally tiny biological machines that can replicate themselves); another year "plant people" (the fusing of human and plant genes that reproduce themselves). This year's strike topped them all!

SEARCH: Put yourself in the place of the freshman student who had chosen a genetic disease with the intimidating name of "acute intermittent prophyria" (a blood disease) for the topic of his report. Students regularly start their searches for this unit in Dialog's File 149, Health Periodicals Database. Among the many full text articles and consumer summaries, HPD also abstracts citations to relevant articles in some of the major newspapers, including the Washington Post, the Los Angeles Times, the Wall Street Journal, and the New York Times. (Note: My wish list to DIALOG would be to add the Wall Street Journal - if it could ever be wrested from the talons of Dow Jones - and the New York Times, now available online only from Nexis). Once the search in **HPD** is finished, students then transfer their searches to the Papers Collection for late-breaking news on the genetic topic, or to a specific newspaper file to retrieve the complete text of a referenced article.

Figure 7

```
?SS PORPHYRIA?/TI,DE AND GENE?/TI,DE

     S1      34   PORPHYRIA?/TI,DE
     S2   10343   GENE?/TI,DE
     S3       5   PORPHYRIA?/TI,DE AND GENE?/TI,DE

?T 3/6,SO/ALL

 3/6,SO/1
06098449  Dialog File 149: Health Periodicals Database
    TITLE: Red blood cell porphobilinogen deaminase in the evaluation of
acut intermittent *porphyria*.
JOURNAL: JAMA,  The Journal of the American Medical Association
VOL.: v257   PAGINATION: p60(2)

 3/6,SO/2
05213804  Dialog File 149: Health Periodicals Database
    TITLE: Hepatoerythropoietic *porphyria*: clinical, biochemical, and
enzymatic  studies in a three-generation family lineage.
JOURNAL: New England Journal of Medicine   VOL.: v316   PAGINA-
TION:  p645(6)

 3/6,SO/3
03790725  Dialog File 149: Health Periodicals Database
    TITLE: Dracula, Wolf Man legends may contain a drop of truth; genetic
disorder  may trigger thirst for blood. (*porphyrias*)
JOURNAL: Washington Post   VOL.: v108   PAGINATION: Pa2   COL-
UMN  NUMBER: col 5
```

RETRIEVAL: By using suffix field delimiters, Noah's search strategy achieved precise retrieval in HPD Both "porphyria/ti,de?" and some form of the root "gene/ti,de?" had to appear in either the title or descriptor fields. The use of truncation for each term furnished sufficient flexibility in this narrow search. Although there were thirty-four references to the rather rare disease in this medical database, the genetic component of the search statement expeditiously reduced retrieval to five items (Figure 7).

While scanning the citations in a modified format 6/user-defined format, Noah and I gasped in disbelief at one of the titles. Our investigation had suddenly led us from the cold, antisep-

continued on page 13

tic world of genetic engineering into the world of the supernatural! (See Figure 7, Citation 3). To say the least, the interest of my young student went into over-drive! After completing his search in HPD, Noah entered FILE 146, The Washington Post to download the full text of that prize citation. Hot on the trail, he then transferred to the PAPERSMA collection. It was not likely there would be an over-abundance of articles on this disease in the newspapers, so Noah ran a simple free-text search looking for "porphyria?/ti,lp,de" in the title, lead paragraph, or descriptor fields - and was rewarded with the group of articles shown in (Figure 8) in an abbreviated user-defined format (title, source, and word count).

Noah was triumphant. His science term paper had suddenly given him a golden opportunity to unleash his imagination. He could now legitimately cloak his science project with the thrill and excitement of the sensational and the macabre. Assuredly, his paper would grab his teacher's attention.

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?SS PORPHYRIA?/TI,LP,DE                                      Figure 8

      S1     7   PORPHYRIA?/DI,LP,DE
?T 1/TI,SO,WD/ALL

 1/TI,SO,WD/1
DRACULA, WOLF MAN LEGENDS MAY CONTAIN A DROP OF TRUTH;
GENETIC  DISORDER  MAY TRIGGER THIRST FOR BLOOD. (*PORPHY-
RIAS*)
The Washington Post, May 5, 1985, FINAL Edition
 Word Count: 480

 1/TI,SO,WD/2
VICTIMS OF *PORPHYRIA* FIGHT STIGMA THAT LINKS AFFLICTION
TO VAMPIRES
Los Angeles Times (LT) - SUNDAY August 16, 1987
Word Count: 810

 1/TI,SO,WD/3
VAMPIRE THEORY HAUNTS *PORPHYRIA* VICTIMS
Los Angeles Times (LT) - SUNDAY August 25, 1985
Word Count: 1,742

 1/TI,SO,WD/4
RARE BLOOD AILMENT MIGHT HAVE CAUSED VAN GOGH'S AGONIES;
*PORPHYRIA*  NOW THE DIAGNOSIS
Miami Herald (MH) - THU  December 26, 1991
Word Count: 827
```

SUMMATION

Previously, in the field of education, an activity was considered successful if it captured and maintained students' interest, but, with the degree of serendipity possible on-line in **PAPERS**, even an assignment in biology can rival the allure of any screen thriller! ❑

YOURS FOR THE ASKING

free material available upon request

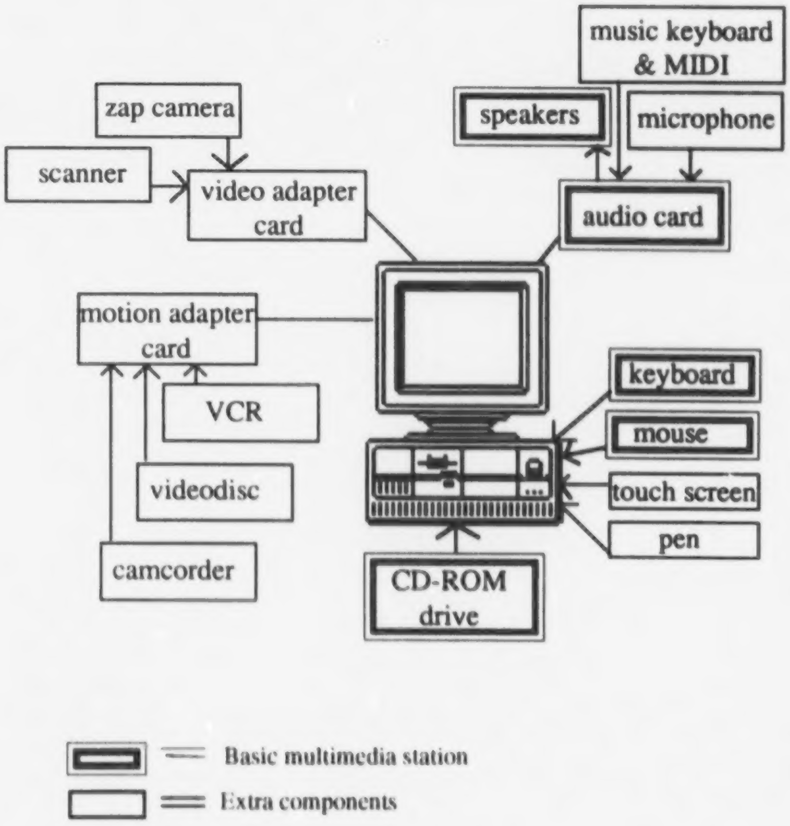
The materials (worksheets, curriculum units, software program samples, etc.) are provided by librarians and teachers who have developed and used them successfully. They believe in sharing and encourage you to join us. The following are your for the asking if you send a self-addressed envelope to Information Searcher, 14 Hadden Road, Scarsdale, NY 10583

Send a self-addressed stamped ($1.25) 81/2 by 11 envelope to receive copies of Lyons Township High School's Medieval research curriculum unit, "Project Persona" and "Online Searching and Global Relations." For more information on these curriculum units read the Networking column on page 3.

To network with other librarians and teachers who are learning Linkway write to John Rogers. He has instigated an exchange of ideas and information on multimedia and encourages the sharing of multimedia applications developed by students and teachers. For each diskette of samples you send, you will receive a disk of other samples with Linkway ultilities and examples. Send your questions,communications and samples to John Rogers, 3523 Old Maple Road, Omaha NE 68134
For more information on multimedia and Linkway read Denise Shorey's article on page 1.

Multimedia..continued from page 1

A Multimedia Workstation



can be quite low. Linkway can be run on a stand-alone workstation or a network. It's a good example of what can and is being done in many schools throughout the country today.

Linkway allows a user to create a "folder" with many "pages" inside. Each "page" is a screen containing information including visuals, text and sound. Pages can be linked together in any order, similar to programmed learning books prevalent in the '60s and '70s. Moving between pages or calling a pop-up screen for more in-depth information is done using "buttons." Click on a button to read more about a wolf, see pictures of a wolf or hear the sound of a wolf pack howling. The program includes a simple paint program that allows students to create their own artwork. For those not artistically inclined, most images that can be pulled up on a computer screen can be captured in Linkway format, using the LW capture file free with the program. Once captured in the Linkway format these can be used in any "folder."

Much of this is similar the old slide-tape shows. An outline of information and a script for a presentation must still be prepared. Students must still research and organize for any written or visual presentation. An extra step requires students to use critical thinking skills--designing how the pages will be inter-related.

Because Linkway allows a user to link to any other page, it is not limited to linear presentations. The visuals, text and sound are created using the computer as the organizer instead of the slide carousel or the VCR. It is easy to tailor a presentation by editing the sequence of pages or the information on the page. Presentations can be customized and then reused in a different setting simply by reorganizing what already exists or adding more. The pictures, sound and text are all stored on a disk. This means no more worry about tipping the slide carousel upside down and having to put slides back in order minutes before a class begins.

Adding Bells and Whistles

Once the simple skills for interactive multimedia production are mastered, its time to move on to more complex areas. Many of these new "bells and whistles" require additional pieces of equipment and/or a more powerful computer. Some schools set up one or two multimedia workstations with all the additional parts rather than equip every computer with them. It is almost always possible to create a major part of a presentation on a simple machine and then add any special features from the multimedia workstation.

Special Features

Many video skills can be used in Linkway by adding video boards to the computer. Video boards are used to digitize images for use in presentations. These images may come from a video camera, a laser disk or CD-ROM. "Zap-shot" video cameras that take still image video pictures are being used by some students schools. Once the image is captured through the board, sound and text can be added to the picture to customize it.

Buttons can be created to show a portion of full-motion video or a single image. LinkWay allows the user to

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write scripts to access CD-ROM, Laser disk or other programs in DOS. With the use of a special card called the M-Motion card, full motion pictures from a laser disk or live video camera can be put directly on the computer monitor screen. This eliminates the cost of an additional monitor for the laser disk. It also makes the presentation easier to follow because the viewer need only watch one screen. Working with video images, CD-ROM and laser disk can be extremely effective when there's a need to see an item as well as hear about it in a lecture.

Sound boards are added to import stereo sound, voice or prepackaged sound effects. There are a number of sound devices that can be used with Linkway. Digitizing comments or directions and having the sound play as soon as a page is brought on the screen helps insure students always receive the information needed.

Sophisticated and complex operations take money and time to learn. If you are just beginning to use multimedia, start small, don't try to learn all the components at once. You can run a simple inexpensive Linkway workstation or a full-blown Multimedia workstation running Linkway with all the additions, including CD-ROM, Laser disk, full motion video from your computer monitor and stereo sound. Each workstation will provide presentations produced by students and teachers; however the extras can be expensive, so be sure to start at a comfortable level.

What's Happening

Schools across the country are using Linkway both in the classroom and the Library Media Center. Elementary schools produce simple projects, such as "Andrew's Animals". A first grader wrote and produced his own Linkway show about animals, using text and scanned pictures with buttons to go from page to page. Now he is training next year's first graders to produce their own shows. High schools are using

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A Glossary of Multimedia Terms

CD A compact disc. A 12cm plastice optical disc used to store large amounts of inforamtion.

CD-I Compact Disc Interactive. Acompact disc format containing pre-recorded digital video, audio, and optical text data.

CD-ROM Compact Disc Read Only Memory

CD-ROM-XA Compact Disc Extended Architecture

Disc Refers to optical storage medium

Disk Refers to magnetic storge mediaum

Digital A discretely variable signal or characteristic such as a pulse, digitized image,or animated video as opposed to an infinitely varialbe **analog** signal or characteristic such as time, temperature or movie video.

Laser An acronym for light amplication by stimulated emission of radition. Optical media is read by laser beam.

Optical Computers systems that use laser beams to read data that is electronically stored.

developed by Susan K. Kinnell

A Sampling of Multimedia CD-ROM Products

Compton's MultiMedia Encyclopedia
Grolier Electronic Encyclopedia
Desert Storm: the War in the Persian Gulf
Mammals: A Multimedia Encyclopedia
Multimedia Beethoven: The Ninth Symphony
Mixed Up Mother Goose
Learn to Speak Spanish
TIME Magazine Compact ALMANAC
The Presidents: It All Started With George
Street Atlas USA
Multimedia World Fact Book and CIA World Tour

Multimedia...continued from page 15

For More Information

Hypertext/Hypermedia in Schools: A Resource Book **by Carl Franklin and Susan K. Kinnell .This is the definitive book on hypermedia in schools. Great resource to learn the basics, network and learn how to get your students involved in hypermedia.**

Check out a new magazine, *MPC World.*, devoted to multimedia in all arenas, business, home and school.

"Charting a Course for the Multimedia Bandwagon" by Joe Hofmeister, *Information Searcher*, Vol.3, No3, page 3.

"Multimedia" *PC Magazine,* March 13, 1992, page 112. Gives the background on the two multimedia standards being developed by IBM and Microsoft.

Linkway instead of the traditional term paper. Students still do all the traditional research and organizing, then produce a Linkway folder with information including text, sound and graphics to illustrate what they have learned.

Linkway is in many commercial applications also. **Mammals--a Multimedia Encyclopedia** is a joint project from National Geographic and IBM and is produced in Linkway. National Geographic pulled examples of mammals from its extensive library of still photographs and videos, added sounds for many of the animals and produced a CD-ROM. Students using Mammals can see an animal, listen to the sounds they make, printout a hardcopy of a report on the animal, view still pictures and read the captions, as well as see the animals move using motion video clips. Multimedia information equals traditional print encyclopedia and then surpasses it..

Another interesting commercial application is **Hurricane Hugo.** Produced by Turner Broadcasting Systems, it uses a videodisc to play full motion video along with the Linkway interface on the computer. This kind of interactive video allows students to learn about aspects of hurricanes in general, as well as Hugo in particular. CNN News video of the hurricane adds a real life touch. Other new products being released include AIDS and Drug/Alcohol Awareness programs, where students see active situations and can make decisions with different consequences. Watch for many new and exciting commercial multimedia products in the next year.

Planning the future

Many technical journals have published articles recently dealing the Multimedia and the upcoming standards for Multimedia workstations. IBM, Apple and Microsoft are working on hardware specifications. As a media specialist in a school trying to stretch your budget, what should you buy that will provide Multimedia yet still be versatile enough to meet other school needs?

At this time, IBM and Apple have agreed to produce a single multimedia standard and Microsoft has released a proposed standard. In as much as these standards are just beginning to be finalized, it could be sometime before one single Multimedia workstation for everyone exists. Keep this in mind when purchasing new equipment. Fortunately, there are common items to consider that will help make machines purchased now adaptable when a common standard finally exists. These are listed below. Pick and chose components that can be used now and are still affordable. Be sure to ask your dealer about upgrades and additions to the hardware you choose.

Multimedia products will require more speed than before, so work toward a faster computer such as a 386. These will be able to run more of the new multimedia software being developed.

Memory, as well as speed, makes the computer work faster--consider more than 2 megabyte of memory. Eventually computers will need 4-6 megabytes for the high-end multimedia programs.

Audio cards allow computers to record and play back sound for presentations. Students often say that this is the one feature they don't want to do without.

The CD-ROM provides space for predeveloped software with both sound and visuals. Multimedia programs use up huge amounts of storage space that are expensive to put on a hard drive. So many new multimedia CD-ROM products for education have been released in the past six months it's impossible to keep abreast of all of them.

Multimedia's possibilities are fascinating and great fun. Remarkable changes continue. "Virtual Reality", a tool available now only in laboratories, will soon become a "simple reality" in the classroom. Use your imagination: make a multimedia presentation of what capabilities the year 2000 will bring--it might come true. ❑

*Editor's Note: Look at **Yours For the Asking** Column on page13 for information on networking with Linkway users.*

APPLICATIONS AND USE OF CD-ROM TECHNOLOGY IN SECONDARY SCHOOL LIBRARY MEDIA CENTERS

by Roxanne Baxter Mendrinos
Head of Library Automation,
Technical Services, Foothill College,
CA

Should the school library media center invest in CD-ROM technology or should it only provide access to online databases? Should the periodical collection be maintained, expanded or eliminated if a CD-ROM index with periodicals on microfiche is available on a subscription basis? Is inservice faculty training and formal classroom instruction necessary to adequately utilize the CD-ROM technology?

These were some of the questions that acted as the impetus for a research study on the use of CD-ROM technology in secondary school libraries conducted in 1990 with 379 library media specialists from Maine and Pennsylvania. The information from this study will assist library media specialists and administrators contemplating the use of the CD-ROM technology to:

- to learn from the experiences of others to identify the most widely used CD-ROM laser discs
- to examine the implications of budget, and staffing on CD-ROM use
- to compare patterns of use within the curriculum
- to compare services offered by trained staff
- to provide data on security issues
- to compare methods of evaluation

FINDINGS

There has been an increasing and continuing use of the CD-ROM technology for reference in secondary school library media centers since 1986. Only twenty-six percent of the group were using it for reference in 1986 as compared to ninety percent by 1990.

"Electronic Encyclopedias, magazine and newspaper indexes were the most popular CD-ROM discs."

Three quarters of the library media specialists who are using the CD-ROM technology for reference plan to acquire more workstations. One third of the library media specialists who were not using the CD-ROM technology for reference plan to by 1992.

The major obstacle for those library media specialists who are not using it for reference was funding. The majority of these library media specialists believe it costs too much in relation to their total budget. Secondary school library media specialists using the CD-ROM technology for reference had larger budgets. As the budget increases the use of the CD-ROM technology for reference increases.

The typical library media center averages between one to three CD-ROM workstations and has one to three CD-ROM laser discs. The range of CD-ROM workstations was from one to seven, and the range of CD-ROM discs was from one to nine. Even with state funding and a conscious effort to provide equity in access, there already was a significant difference between the above average and the below average socio-economic levels. The higher socio-economic districts averaged three CD-ROM laser discs as compared with two for the below average ones and two CD-ROM workstations as compared with 1.5 CD-ROM workstations for the lower socio-economic levels. With the fiscal constraints of the early 1990's, it is important that these disparities do not increase affecting students equal access to information and search and retrieval strategies.

DATABASE TITLES

Electronic encyclopedias, magazine and newspaper indexes were the most popular CD-ROM discs. Ready reference tools that direct the user to other accessible information formats and/or provide full-text articles were the most frequently utilized. The seven most frequently accessed commercial CD-ROM laser discs according to the surveys were Grolier's Electronic Encyclopedia (44%/135), Information Access' Magazine Index (20%/60), ERIC (Silver Platter) (19% /59), EBSCO's Magazine Article Summaries (18%/56), Compton's Multimedia Encyclopedia (10.5%/32), Newsbank (9.5% /29) and Microsoft Bookshelf (7.5% /23). Library media specialists

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Applications and use...continued from page 17

(7.5% /23). Library media specialists commented that before using the CD-ROM magazine and newspaper indexes, students did not understand the differences between them. The CD-ROM databases for reference were used consistently and often.

CD-ROM POPULARITY AND FREQUENCY OF USE

CD-ROM's popularity with faculty, administration and students can be attributed to the fact that it is user or student-oriented. CD-ROM technology for reference contributes to the educational needs of the curriculum, promotes student achievement, growth and self-esteem in average, special needs and learning disabled students. Its ease of use, quick printed results, no per minute costs, the quality of information provided, the excellent breakdown of topics, and the need for critical thinking searches were most often mentioned in the interviews and in the margins of the surveys as reasons for its popularity. The use of CD-ROM for reference points users to other sources of information increasing demand and satisfaction by library patrons.

NETWORKING

Only 4.5%(13) are presently networked, but the number will increase to one 33% (91) of the CD-ROM reference using library media centers by 1992. Library media specialists are networking classrooms, disciplines specific departments and providing remote dial-in access to the CD-ROM technology from home. Problems include increased demand promoted by networking, slower response time in the network versus the stand alone computer, the need for more printer access, and more networked software. There is a growing interest in networking which is creating a library without walls.

STAFFING

Additional staff was not required for the use of CD-ROM technology for reference purposes. Training patrons contributed greatly to making them self-sufficient users.

"CD-ROM's popularity with faculty, administration and students can be attributed to the fact that it is user or student oriented."

FUNDING

The library media center budget was not the only source of funding for CD-ROM workstations and laser discs. The acquisition of CD-ROM technology for reference was not based on student enrollment but on demonstrated educational need and good public relations on the part of the library media specialist leading the way to increased administrative support. Involving the administration and faculty in the use and benefits of CD-ROM technology for reference will increase library media center access to school district funds as well as special funds such as Chapter II. "It's not the student enrollment that correlates with increases in CD-ROM use or the need for more workstations, it is the educational need that determines an increase in the use of CD-ROM technology and the demand for more workstations."

Grant monies (44%/133), the new equipment budget (39%/65) and a combination of different funding sources (22%) were the most popular means for library media specialists to acquire CD-ROM workstations for their library media centers. The new equipment budget (38.5%/65) was primarily used for funding additional workstations. Access to the new equipment budget for library technology underscores the importance of working closely with the administration.A minority (13%) of library media specialists were using the book budget exclusively to fund initial workstations and only six percent were using it to acquire additional CD-ROM workstations. What is noteworthy are the library media specialists' remarks in the interviews and on the margins of the surveys stating that if no other source of funding CD-ROM technology for reference was available they would use the book budget. Why? The use of the CD-ROM technology for reference by special needs, learning disabled and average students was increasing library use, interest and productivity by this population of previously infrequent users. This is the majority of the student population!! The book budget was the source used most often (23%/64) followed by grants (16%/43) for funding CD-ROM laser discs.

ATTITUDES

Library media specialists who use this technology for reference are much more positive in their attitude toward the technology. Library media specialists who use the CD-ROM technology for reference:

* Prefer to use a CD-ROM database when a choice of formats including online databases are available. "CD-ROM has more access points" "LD and special education students use CD-ROM" "It adds more to student interest! "

* Believe the acquisition of CD-ROM reduces the number of online searches. CD-ROM provides unlimited access. Students can use this technology successfully without assistance from the Library Media Center staff. It is easier to use. CD-ROM has predictable costs.

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Students are using the same searching and thinking strategies with CD-ROM as they would be doing online searching

*Strongly believe there is no serious threat of vandalism, theft and/or mutilation of CD-ROM software and/or hardware. 93-98% of CD-ROM using library media specialists were in agreement on three different questions relating to security issues

*Prefer CD-ROM systems as an improvement over print products due to: accessibility, immediate gratification, increases library use by students ,faster, easier to use, ease of obtaining printed result, excellent division of topics into subtopics, more efficient space allocation

*Prefer a CD-ROM system when the printed reference work is available

*Strongly believe in the positive effect of the use of CD-ROM for reference on the patron's image of the library media specialist. The stereotypical image of the library media was altered, and the curriculum was changing to reflect access to more current sources of information. The access to the CD-ROM technology for reference was increasing the demand for information and the use of the library media center.

*Believe that CD-ROM technology for reference is a cost-effective alternative to heavily used online databases The most frequently utilized databases such as ERIC, Magazine Index, and the Academic American Encyclopedia (Showers, 1988) are the most popular and frequently utilized CD-ROM laser discs.

When asked of the educational outcomes in the interviews, all the library media specialists strongly emphasized that CD-ROM technology used for reference purposes has a tremendous positive effect on Special Education, Learning Disabled and average students. The comments attesting to this were numerous and unsolicited on the margins and backs of the surveys.

TRAINING AND CURRICULUM

This study clearly indicates that library media specialists should not simply teach the mechanics of the hardware and software. There are larger educational issues that exert a substantial impact on critical thinking,. the patron's personal, professional and instructional use of CD-ROM technology as well as its use within specific disciplines.

Almost all library media specialists conducted Point of Need or one on one instruction. Slightly more than three quarters offered formal classroom instruction designed to integrate its use within the curriculum. Only fifty-three percent of the library media specialists who have it available for reference conduct Inservice Training for faculty and administration.

Most (83%) train their patrons for a period of thirty minutes or less. Only seventeen percent instruct users for periods of forty minutes to two hours. The longer the period of instruction, according to this research, the more likely the library media specialist will require students to work out search strategies and have them approved by a library media specialist. The development of the students' lateral thinking processes that occur with the longer instruction periods promote information literacy.

Library media specialists should rethink the purpose of their instruction and the time limitations in light of the need for increased critical thinking strategies and evaluative processes in the students' learning experience.This research indicates a strong positive relationship between training and the use of CD-ROM in the curriculum.

Faculty training is the push that starts pendulum moving. The more faculty who are trained, not only understand the use of the CD-ROM technology but integrate its use within their respective curriculum. This increases the pattern of use of the CD-ROM technology for reference purposes within the discipline. Trained faculty use the CD-ROM technology more for their own Graduate work, professional use and for personal and leisure interests than faculty who have no training.

English, Social Studies and Science used the CD-ROM technology for reference to a greater extent than all other disciplines. English was ranked first (57%) , followed by Social Studies (43%) and then by Science (17%) as the subject found most helpful to students in CD-ROM searching.

Less than fifty percent of all science faculty are exposed to the CD-ROM technology. This has affected the number of classes that have had formal instruction as well as its use by students and faculty in the sciences. Inservice training is the door to library and faculty interdisciplinary development and towards the realization of information literacy.

More faculty training is critically necessary to realize the benefits of this technology. If the benefits of this technology not only in the access and retrieval of current information, its implications of renewed curriculum relevancy and its positive impact on student achievement and the learning abilities of the At Risk student are to be fully realized.

This study indicates that the inclusion of CD-ROM technology as part of the Library Curriculum approved by the School Board increases Science faculty training in the use of CD-ROM technology for reference. It increased formal classroom instruction in the use of CD-ROM technology for reference purposes in the disciplines of English, Science, Social Studies, and Library Skills. Pre-thought, pre-planning, team partnerships between librarians and teachers in developing curriculum to incorporate the CD-ROM technology for reference within the classroom are the by products of submitting a Library Curriculum that is approved by the School Board.

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PEGASUS 2020

WHAT WILL THE SUPERBOWL BE LIKE IN 2020?

By Bob Stoneham., Librarian, Fairfax High School, MD

PURPOSE

This project is intended to expose at-risk, underachieving students to the fun and efficiency (and some of the frustrations) of online database searching. It is important that this project be removed, so far as possible, from a competitive classroom environment. The purpose of the project is empirical not academic.

MAJOR GOALS

Each student will: design a viable online search plan, conduct online searches in at least one CD-ROM and one Classmate database, and present a display exhibit showing what the Superbowl might be like in the year 2020.

MINOR GOAL

Students will recognize that success usually requires considerable effort and planning and will participate in problem-solving activities in small and large groups.

MANAGEMENT TEAM

The project will be managed by a team consisting of the principal, the librarians, and the teacher coordinating the mentor program. Online instruction will be the responsibility of the librarians and the distinguished guest. A mentor teacher will be assigned to each student to provide advice and guidance.

PARTICIPANTS

Mentor teacher will select 25 students to participate the project. Preferences will be given to students most at-risk who lack any online experience. The parent(s) of each student will be encouraged to participate whenever possible.

DURATION

The project will take at least 6 weeks to complete. Each session (except for the "Overtime" events) will take place on consecutive Saturday mornings from 10AM to noon.The making of displays for the final project will be done on the students' free time. The site of the project seminars varies:

SEMINAR	*SITE*
Kickoff	Cafeteria
1st Quarter	Library
2nd Quarter	Library
3rd Quarter	Computer Lab
4rd Quarter	Library
Overtime	Cafeteria

DATABASE RESOURCES

Databases for the project will include (but not necessarily be limited to) the following sources:*CD-ROM Databases*: Periodical Indexes, Encyclopedias *Classmate:* Magazine Index, Magazine ASAP, Sport, All full-text news

EVALUATION

Mentor teachers will be surveyed at the end of the project to evaluate the effect of the project on the attitude and academic performance of their student. Participating students and their parents also will be asked to evaluate the project. Finally the management team will compile the surveys, identify the projects strengths and weaknesses, and determine if the project should be repeated.

FOLLOW-UP ACTIVITIES

A congratulatory party will be held in the library at the end of the project. Each student will receive a Certificate of Completion and a T-shirt containing the project logo and motto.

RESEARCH

Students in each group will be provided a topical question as a suggested starting point.

***OWNERS:** In what cities were previous Superbowls played? What factors were involved i the choice of those cities? As a team owner, what city would be your choice for Superbowl 2020? Explain why?*

FOR COACHES:*Your team has never lost on artificial turf, but is winless on grass. What are the advantages and dangers of turf? What kind of surface should Superbowl 2020 have? What are the advantages to your team?*

FOR PLAYERS:*Trace the evolution of the football helmet. How and why did the changes occur? What will a helmet for Superbowl 2020 be like? Explain why.*

FOR TRAINERS:*What role does proper nutrition and fitness play on athletic performance? Which chemicals are dangerous and why. Design the perfect training program for a Superbowl 2020 player.*

FOR MEDIA:*Advertising and athletics have become strange bedfellows, What effects has television advertising had on professional sports in the last 20 years? What effect will it have in the year 2020?*

THE GAME PLAN

THE KICKOFF

All participants in the project PEGASUS 2020 will be invited to the Kickoff, including the parents of participating students. It will take place in the school cafeteria from 10AM to noon. The purpose of the Kickoff is to: Introduce the scope and intent of PEGASUS 2020 to all participants and their parents; Emphasize that the project is meant to be a positive real-life experience, not a competitive academic exercise; Give participants an opportunity to hear inspirational testimonials from distinguished guests and online experts; Set the tone of the project, that students with a history of failure can acquire skills and attitudes that will lead to a successful future.

The schedule: 10AM-11AM Social Brunch
11AM-12Noon Program:
Welcome - the Principal (5 min)
Game Plans - Redskins Coach or player(15 min.)
Online to Success - Dialog Representative (15 min.)
Project Overview - Management Team (15 min.)
Students select groups in which they want to participate (10 min.)

1st Quarter Activity

Welcome
Review Kickoff and purpose of project
Demonstration of Dialog search to show potentials
Classmate Unit 1: Introduction.
TIMEOUT
Distribute suggested search topics to each group.
Huddles: students select topics
Classmate Unit 2: Planning Your Search

2nd Quarter Activity

Quick review of 1st quarter
Presentation describing and demonstrating databases: CD-ROM and Classmate
TIMEOUT
Classmate Unit 3: Search Commands
Huddles: draft initial search plans
Conduct trial searches on CD-ROM
Group reports

3rd Quarter Activity

Quick review of 2nd quarter
Classmate Unit 4: Preparing an Online Search
Trial online searches of Classmate databases
TIMEOUT
Huddles: finalize search strategies
Conduct final Classmate searches.
Group reports

4th Quarter Activity

Quick review of 3rd quarter
Find sources for citations
Evaluate relevance of findings
TIMEOUT
Huddles: brainstorm possible displays based on relevant sources
Finalize plans for display project.
Group reports.

OVERTIME

Each group will make one display to be part of the overall exhibit on what the superbowl might be like in the year 2020. Group members will displays on their own time. The management team will help students obtain supplies and equipment to construct displays. All participants will meet on Saturday morning to organize, set-up and finalize the exhibit. The exhibit will be displayed in the school cafeteria/commons area for one week, ideally the week before the Superbowl.

Riddle of the Sphinx...continued from page 6

on **Egyptology, antiquities, archeology, monuments, research,** or **history**

Not sure of how much coverage there would be, Jyl entered her search in the full Papers collection - and was promptly swamped by 152 articles in **set 8** (Figure 1). Since there was bound to be duplication among the newswires, Jyl decided to limit her search to the MAJOR PAPERS, by adding a simple suffix to her last set (**s8/majpapers**). This resulted in 65 citations in **set 9.** Jyl then limited retrieval to articles having more than 1000 words by appending the suffix **/long** to the search set. The final **set 10 includes** nine lenghthy and informative articles, perfect for Jyl's paper. A selection is shown in (Figure 1) in a user-defined format (title, source, word count) - and a request for the display of the first record from each paper. ❑

Was She Anastasia?...continued from page 7

not call on them, these terms actually turned out to be some of the descriptors in the articles we retrieved.

Joseph used free-text searching of the two names (with no field delimiters) and the (2N) proximity connector in order to retrieve the names of the Duchess (2N) Anastasia and Anna (2n) Anderson, in whichever order they might appear.

The search statement ANDed the two names (Anastasia or Anderson) with the descriptors (history or USSR or Russia or Soviet Union). As (Figure 2) indicates, nine articles were retrieved. After scanning them in a modified format 6/word count format, Joseph decided to limit retrieval to those newspaper articles that were lengthy enough to provide sufficient, in-depth background information by adding the suffix delimiter (/LONG) to his search set. This very precise search strategy resulted in a final set of five very relevant, usable articles, all over 1000 words in length. ❑

The Ill-Fated Diamond...continued from page 8

RETRIEVAL: Suzie **BEGAN** in the PAPERS full collection. With the KWIC and HILIGHT options enabled, it quickly became apparent that, since, the gem is housed in the Museum of Natural **History**, we could not productively search for the term **history** near, or in the same paragraph, with the name of the diamond.

So Suzie used the (S) proximity connector to search for **HOPE DIAMOND/TI,LP** (in the title or lead paragraph fields) in the *same paragraph* with terms such as **(BAD(W) LUCK or ILL (W) LUCK, or ILL (W) FATED or ILL-FAMED), or LEGEND? or FABLE?)** - hoping that these would naturally draw in the history concept. This search statement produced fourteen excellent records in **set 13,** (Figure 3).

Using the **KWIC** feature, Suzie examined the fourteen records and selected five articles to download full text. Several are shown here in a user-defined format, consisting of title, source, word count, and KWIC abstracts (abbreviated in the interests of space). Suzie was particularly fortunate in finding a long **feature article** from the Sunday Magazine Section (record #9). ❑

Sport Sleaze...continued from page 9

articles that dealt with the **early** stages of the Commission's investigation. By specifying March 1991, we would pinpoint retrieval to articles with analyses of and reactions to THE FINAL REPORT that appeared **immediately after its issuance.**

RETRIEVAL: Since the topic was of national importance, we ran our search in the PAPERSMA category. Geoff, the team captain, first searched for KNIGHT within two words of the term COMMISSION, in the title, lead paragraph, and descriptor fields (Figure 4). Geoff then ANDed the resulting sixty-eight records with prefix delimiters for SECTION (SH=SPORTS) and Date (PD=9103??). (**Note**: Use of the (?) wildcard mark after the month locates all articles published during the month of March) Precision was increased by combining the resulting 27 items in (set 17) with the terms (REFORM? or RECOMMENDATION? or REPORT?) in the title field. This resulted in fourteen very precise articles, shown here in (Figure 4) . (**Note** the request for one record from each file to be displayed). ❑

Applications... continued from page 19

EVALUATION

Only one third of the library media specialists surveyed conduct user satisfaction surveys. Most of those are informal user interviews. Formal written user satisfaction surveys are almost non-existent. Formal user satisfaction surveys may be worth the extra initiative on the part of the library media specialist to document the effectiveness and impact of the technology on the educational program.

Only one of the ten Library media specialists taught students how to evaluate the sources of information retrieved using the CD-ROM technology for relevancy, bias, opinion, audience and authenticity. With the staggering amount of information one is buried under not only in print, electronic but in media format, these skills and processes are of crucial importance for the educated individual and are a significant part of lifelong learning.

IMPLICATIONS

CD-ROM is the popular and preferred information research tool. If there is a serious concern in the educational community to increase equity, to meet the needs of diverse learning styles, to provide access to learning, and promote interest and motivation among all levels of students and within all socioeconomic levels then increased funding should be made available for CD-ROM technology for reference in the schools. Statewide grants for this technology, CD-ROM based resource sharing made a significant positive difference in the education of students and faculties in Maine and Pennsylvania. These statewide efforts should be replicated. The cost is small in comparison to the benefits.

Administrators, Special Education and Curriculum Directors, and Faculty should work closely with the Library Media Specialists to develop interdisciplinary curriculum and have it approved by the School Board for optimum results. Inservice training of faculty in all disciplines and especially in Science needs to be increased. Formal classroom instruction integrated with search strategies, and evaluation and analysis of information must be expanded in order to effectively utilize CD-ROM technology for reference within the educational program. By forming a bridge between the use of CD-ROM technology for reference, the curriculum and the productivity of students of all levels, the library media specialist has an excellent opportunity to illustrate the indisputable value of information literacy skills and the resources of the library media center to the educational program.

Undergraduate and Graduate Education programs and Library Science programs should not be in isolation of each other. Education majors especially those with administrative specialties should have a course integrating the curriculum practice with critical thinking strategies and Library Research tools. The Graduate Library Science Program should intrude the isolation of the library media specialist by offering a course reflecting curriculum theory and practice and its relevance to Library Research processes. The mechanics of electronic research and retrieval tools should not be the emphasis but the thought processes which need to be developed to effectively utilize them.

Networking will increase create more demand for information services with the addition of more full-text databases the need for greater printer access, increased funds for supplies, faster response times, and more networkable software. Local Area Networks will provide remote access linking schools, community services and the home user promoting good public relations and the possibility for additional funding and support for school library resources.Library Media Specialists need to be proactive! "....The mark of a good student of the future will be the ability to locate and manage information, skills in analytical and critical thinking, and an ability to cope with ambiguity" (Winsor, 1987, p.5). The FUTURE IS NOW! ❑

Editor's note

Roxanne is working on a book, **Building Information Literacy Using High Technology: A Guide for Schools and Libraries** which will be published by Libraries Unlimited in early 1993.It will include curriculum and learning theory, step by step procedures for going online, using CD-ROM technology and networking, curriculum applications, case studies and actual units of instruction.

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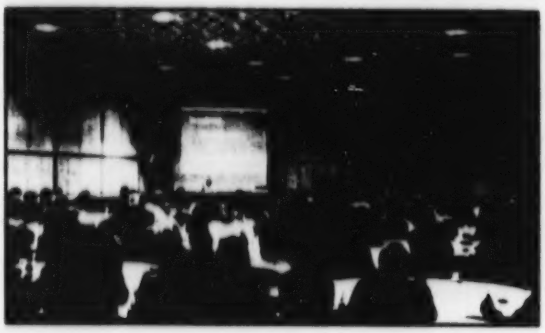

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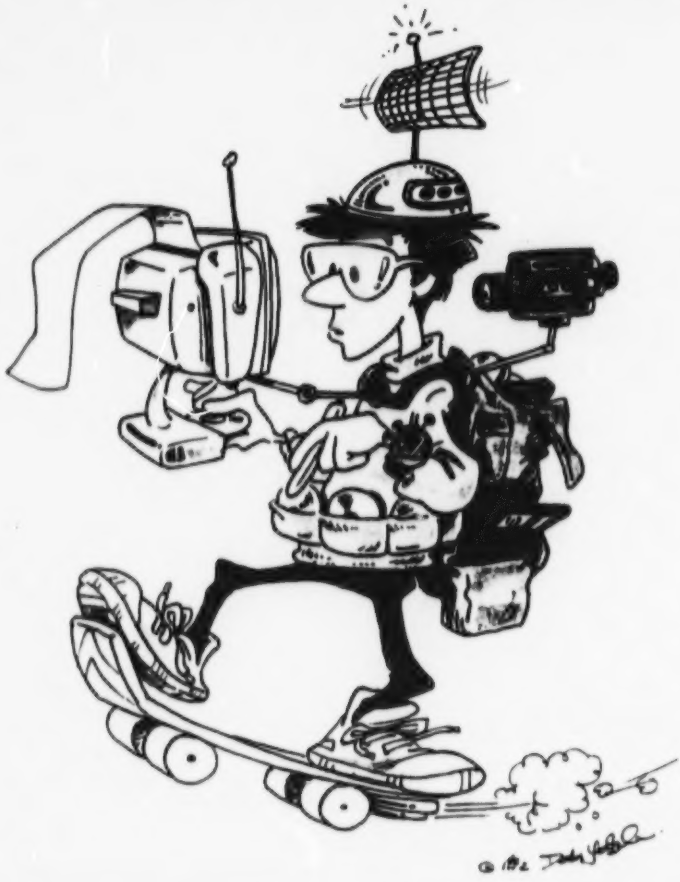

Introducing Socrates II: Student of the Future

By Pam Berger and Louise Wollman

Yo, dudes, Socrates here. Gimme some skin.

I know, to you oldsters, I look like a real happening guy; but me bein' a hip-to-the-truth dude, I gotta lay it on you straight: I'm just your everyday, ho-hum, boppety-bop, hippity-hop Joe High School type.

I know you'll remember my Momster and Dadmeister--in like the 1990's they used to cruise your, let's see, library media centers, *I think was your handle for it. They'd drop in, you'd breeze 'em through the Readers' Guide, they'd glom info for their whatever. Mostly, I bet they just hung out.*

For me, dudes and dudettes, your library media center are ancient history. But chill out. Don't get me wrong here. I'm still a big time fan of those old-time information centers*--Course I'm no gearhead or nothin', but, hey, Libes are very fresh, man--I just don't have to get physical about them. I don't need to hang there like my ancestors. And listen, I rap, like real regularlike, with my library chick via the school computer network or my very fresh computer modem. You gotta get it, people, the old libe is PROCESS, not just some cheesy spot in the school.*

So what is this thing I'm wearin' over my threads, you ask? A PC? A telephone? A television? A cybernetic research assistant? A book? Hey, man, it's all of the above.

In, like, your lingo, when it's a telephone it gives you real time language translation. *Course it maxes out with only popular languages--like I still can't get me Swahili yet, but, still, I can jive with tons of other students types and profs all around the planet.*

And if I pop on my trusty hand-held digital cameras, I get high-def pictures, plus all the regular info. See, them 20th century computer geeks took their main technologies--computer and television-- and ZAP! we got us some REAL "telly-phones"--telecomputers that are what YOU'D call interactive and intelligent.

This baby even chats me up: like say I punch in a messed-up number in my spreadsheet program, for sure

continued on page 18

PROCESSING NOTES *from the Editor*

Are We Ready?

Yo, Mrs. Berger, Soc here. Lay it on me straight. Do the libe profs get my wisdom? Are they ready for me?

Well, what about it? Are we ready for Socrates? As we enter the age of knowledge in which meaningful organization of information will be a paramount asset in the world, can we adopt a vision of the school library as leading the charge. As we enter the age of educational reform, in which students will be challenged to think critically and judge the validity of massive amounts of information, can you envision yourself as a leader in this movement?

As you consider Socrates' challenge..let me tell you about this issue: it will flesh out his world for you. Dave Swartz, computer director at Rocky Mountain High School in Colorado takes us on the Internet, explores a few issues and gives us background. Joyce Rudowski's article on page 19, **Campaign'92,** is just a sample of the type of information that can be found on the Internet - information that makes curriculum come alive and take on meaning for students. Joyce included her telephone number at Cincinnati County Day School if you need help navigating **Campaign '92**.

Judy Lira, Library Media Specialist at Rocky Mountain High School explains how she incorporates new technology into the library media center. Her students are given the world of information and the skills to navigate successfully. Lee Sapienza, our resident supersearcher, from Wayland High School, MA, shares a novel curriculum unit she developed to open the world of online to skills-level students, using the Official Airline Guide (OAG). So often online searching is reserved for just the advanced placement and honors students. This dramatically breaks the mold. I immediately photocopied the article and hand-delivered it to my Social Studies department Chair!

Just in time for the presidential campaign, Linda Singer, from Fairfax County, VA, reviews National Geographic's CD-ROM disc, **The Presidents:It All Started With George.** It's state of the art - text, sound and graphics. Be sure to listen to JFK. His words, in distinctive Boston twang, bring back memories for us oldsters!

Well, later fellow library chicks and chaps, jive with me on Dial-mail, Compuserve or the Internet. Feedback is fresh.

Pam Berger

MAIN MENU

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Information Literacy at Rocky Mountain High School

'Knowledge is of two kinds. We know a subject ourselves or we know where we can find information upon it.'

By Judith Lira, Library Media Specialist, Rocky Mountain High School, Fort Collins, CO

Little did Samuel Johnson suspect the implications his words had for the information age of the 1990s when he wrote them in the 1700s.

Access and retrieving information are vital survival skills; our high school students realize their necessity. Not long after learning to read, children access and retrieve a friend's telephone number or street address information from the telephone book. They discover where to find pictures of dinosaurs in the encyclopedia or how to access the books in the library through the card catalog. Later, they are assigned term papers, reports, speeches and projects that require them to expand their use of resources and technology.

No longer are students confined to the information in their school library media center or the local public library. Technology allows them easier access to information from the whole world. As consumers of information, students must be aware of all the information available, as well as know how to access and retrieve it. This is why we, at Rocky Mountain High School, incorporate Dialog Online Database Searching in our research curriculum. It is why we provide free access to Dialog in our library media program. And why our philosophy is to provide all electronic means possible for students to access the best and retrieve the most. By removing hurdles to access and retrieval, students spend less time looking for the information and more time synthesizing and evaluating what they are able to find.

MEDIA
CENTER

I have incorporated Dialog into the curriculum since 1985. Each year its usage grows. The telecommunication technology gets better, faster, more efficient--and the pool of information sources gets larger. Internet is now accessible to every student in Poudre R-1 School District. This makes the telecommunications technology and all the information sources available to students from home computers as well as from the school's computers. Internet is the next step toward fulfilling my dream of the 24-hour day library, which has information available to each student when and where it is needed. With this added telecommunications technology, the need to stress information skills and higher order thinking skills becomes more evident to Library Media Specialists. Just having the data is no longer enough.

Database searching lends itself to higher order thinking skills. Bloom's taxonomy provides structure that allows students to

continued on page 4

Networking...continued from page 3

achieve learning outcomes. As Library Media Specialists and classroom teachers work together on units requiring information access and retrieval, Bloom's defined classification of cognitive objectives serves as a guide in writing objectives, diagnosing learner behaviors, and planning activities to extend thinking.

We incorporate all six steps into our research projects and we expect our students to go through all six levels to complete any project. At each level, they might do the following activities.

Knowledge
Define terms, e.g. database, Dialog, thesis statement, main concept, Boolean logic, telecommunications, CD-ROM, Internet, computer terms.

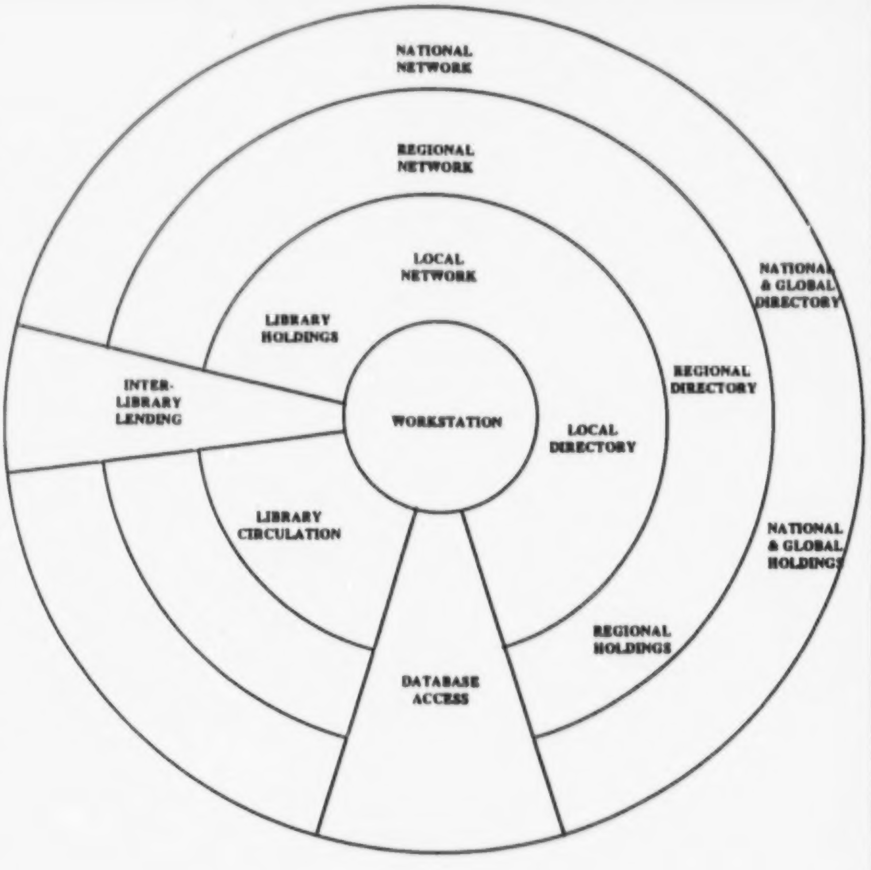
Comprehensive
Prepare thesis statement, select main concepts and synonyms, Locate Dialog databases that are appropriate to topic.

Application
Investigate available sources of information. Apply Dialog search. Locate and retrieve information, using local sources, CARL, fax consortium. Prepare interlibrary loan request.

Analysis
Analyze, compare, contrast, evaluate "relevancy" of all information retrieved.

Synthesis
Produce a well organized, documented three-to-five page paper. Combine, compile, organize all data and present oral report.

Evaluation
Evaluate information. Judge value of material for a given purpose.



LIBRARY NETWORK INTERCONNECTIVITY

Figure 1

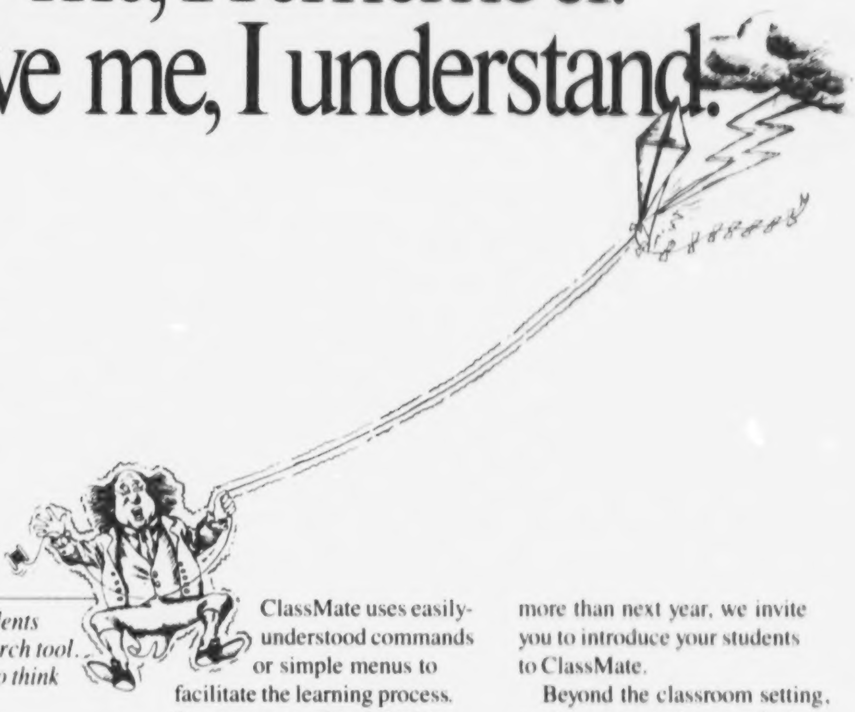
As we incorporate information skills into our curriculum, these six levels of Bloom's taxonomy become increasing important. The goal becomes the search for information plus the use of that information to draw conclusions. As I work with teachers, we develop the appropriate research strategies, goals and activities particular to the unit of study or assignment. This taxonomy provides a structure, a beginning point for database searching and research. Each teacher structures the outcomes on an individual basis. Dialog provides a necessary tool for students to develop strategies to reach goals.

After demonstrating the power of Dialog and doing sample searches, I give a worksheet to every student in the class, which becomes the road map to the database searching. The teacher and I help students get started writing their thesis statements and determining main concepts. Students choose databases before starting a Dialog search. They sit with me at the computer, do all keyboarding, work through all steps on the worksheet. Some of their analysis and evaluation is done while online, when they have to be selective about the information retrieved. Sometimes, the thesis statement does not produce a "hit" and the student must rethink the topic then and there. This individual searching requires creative use of in-class and out-of-class time. Some students have to use unscheduled time to arrive prepared

continued on page 6

Tell me, I forget.
Show me, I remember.
Involve me, I understand.

Ancient Proverb



Give your students more than a research tool. Give them a way to think for a lifetime.

"Go fly a kite."

That's how Benjamin Franklin might have encouraged the students of his day to better understand the relationship between lightning and electricity.

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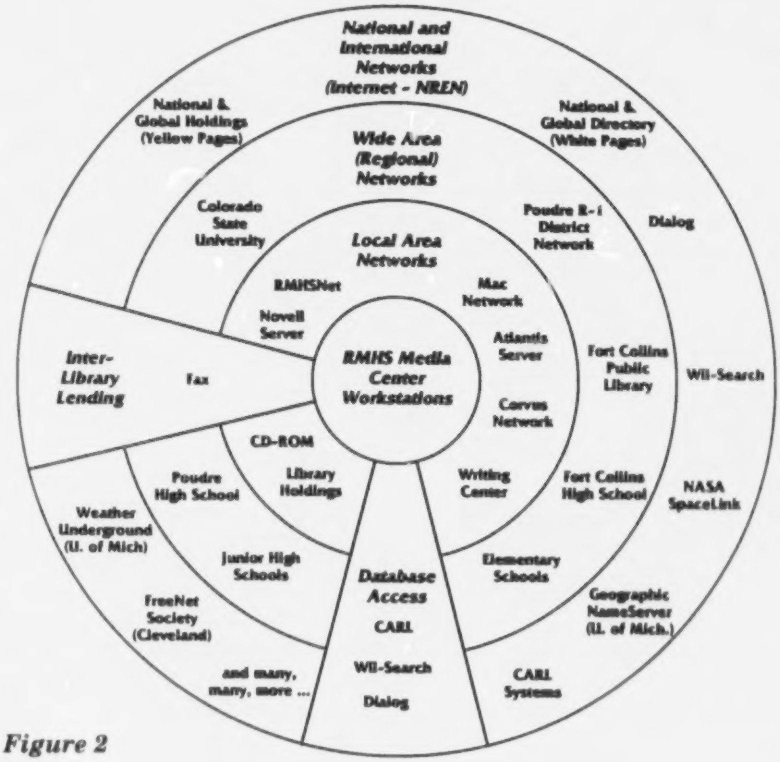
Networking...continued from page 4

at the terminal to work with the Media Specialist. Group projects and cooperative learning work well with this unit.

As the School Media Center becomes the information hub of a vast world of information, students must learn the resources available to them. Jacqueline Mancall and Elizabeth Aversa have demonstrated the relationship of the learner to the many resources available using a chart they presented at the DATABASES IN SCHOOLS Conference '91 in San Francisco (Figure 1). It helps eliminate much of the confusion students feel when they start reaching out for project information. They are asked to enter on their charts the specific names of resources they use as they search, e.g. CARL, DIALOG, NASA, WILSONLINE, READERS' GUIDE, etc. The first chart (Figure 1) categorizes the myriad resources available and makes teachers aware of the importance of teaching information skills. The second chart (Figure 2) shows some resources Rocky Mountain High School students access.

Once students discover that certain information is available, they must then learn to retrieve it. To facilitate sharing resources, Judy MacDonald, the Poudre R-1 District Media Supervisor, organized a Larimer County FAX Consortium, that includes School Library Media Centers, District Media Centers, Public Libraries, Community College and University Libraries. The consortium has expanded our capability for students to access information. If our Media Center does not have an article or a citation that a student needs, we encourage locating the source in the Regional Resource Book-- FAX consortium. Teachers incorporate the fax technology and the fax consortium into their lesson plans and student learning outcomes.

As the media program at Rocky Mountain High School expands and we add new technologies, we will continue to focus on database searching, using Dialog and Internet. Helping our students access and retrieve the information is only the first hurdle in information literacy; intelligent use of the information in decision makes students better consumers of information.


National and International Networks (Internet - NREN)
National & Global Holdings (Yellow Pages)
National & Global Directory (White Pages)
Wide Area (Regional) Networks
Colorado State University
Poudre R-1 District Network
Dialog
Local Area Networks
RMHSNet
Mac Network
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Junior High Schools
Database Access
Elementary Schools
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Wil-Search
and many, many, more ...
Dialog
CARL Systems

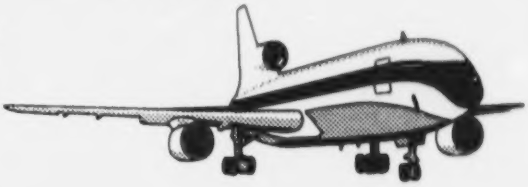
Figure 2

YOURS FOR THE ASKING *free material available upon request*

Lee Sapienza, Information Specialist, Wayland High School, Wayland, MA wrote the article "Around the World on OAG" on page 7. If you would like copies of the student handouts she made, send a self-addressed STAMPED 81/2" x 11" envelope to Information Searcher, 14 Hadden Road, Scarsdale, NY 10583.

The handouts are copies of the computer screens, similar to the screens presented in her article. You can photocopy them for student packets, as well as, make overhead transpariences for group instruction.

AROUND THE WORLD WITH THE OAG



By Lee Sapienza, Information Specialist, Wayland High School, Wayland MA.

Springtime in May! - - A daunting challenge even for a teacher of self-motivated youngsters in the high curriculum tracks. But imagine the additional hurdles faced by Mr. B., with a freshmen Social Studies Level I class whose twelve members qualified as "at risk" students - a small group composed of four white American students: four Afro-American students bussed in daily from a major metropolitan center and four ESL Oriental students, two of whom had reached our shores just weeks before. Daily, Ms. A., a language arts teacher, gave her stalwart assistance to Mr. B. with this class.

All year, this small global-village classroom immersed itself in the study of world cultures. Now Mr. B. and Ms. A. had to plan a project whose novelty would stimulate and sustain student interest, even hopefull, their enthusiasm for the remaining weeks of the school year. A unit of study whose structure differed completely from the customary classroom environment and activities, yet would remain within the parameters of the World Cultures curriculum.

The two teachers capitalized on the fact that in May and June students perennially daydream about the approaching vacation months. So they proposed a world-wide excursion to their class. Each student was to use the online databases available through the computers in the Media Center to research a country of their own choosing to find information they would need as travelers to that country. Based on the evidence presented orally, classmates would vote on the ideal vacation spot that they would all visit in the coming summer. Of course, the winner was promised an award.

Wisely the teachers selected a database that was completely **menu-driven** - where access was simple and intuitive. When anyone thinks of travel, the OAG is the obvious choice. The OAG (Official Airline Guides) Electronic Edition is a comprehensive, up-to-date, user-friendly travel service. Use of its databases is uncomplicated and requires no special knowledge of computers or skill in electronic searching - the screen tells you everything you need to know.

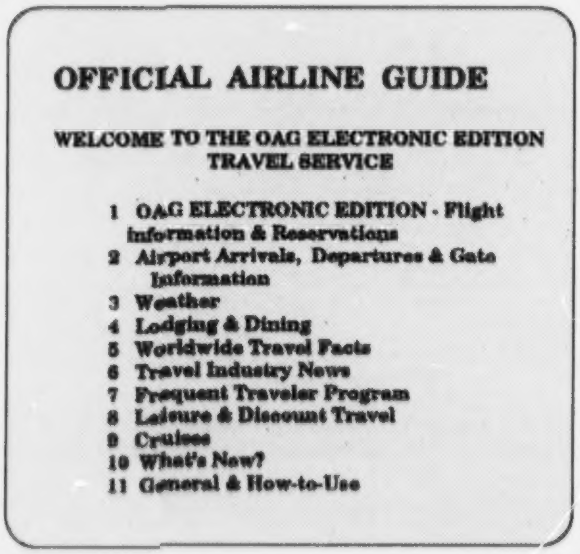
Airlines throughout the world update their flight and booking schedules daily by electronically accessing the OAG's 27 databases. In addition to worldwide listings and ratings on hotels/motels and flight schedules for virtually every airline, including actual fare and seat availability, there are databases, such as the **World Travel Guide** and the **Country & Traveler's Information,** that are packed with pertinent information about every country in the world. Students were asked to find answers to questions such as : What is the climate, so they would know what clothes to pack for the time of year? ... Health concerns: Are special vaccinations needed? ... Is the water safe to drink? ... Are there any State Department travel advisories which might curtail travel in the country for safety reasons? ... What are some of the leisure activities available to tourists? ... What is the history, geography, government and economy of the country? Are there laws tourists must be aware of? What is the language of the country? ...What items can be purchased duty-free? ... And, What are the main sights to see? ...

The entire project was structured to guarantee success for the students. The students could literally play by the numbers. From the time they logged on to the OAG, they were led through a sequence of prompted menus starting with the MAIN SELECTION MENU, to the specific sub-menu of the desired database.

Let's follow Jaime, one of the ESL students who had chosen Malaysia as the country for the class to visit. She dials onto Dialog, one of the online Information Services that offers a gateway to the OAG,

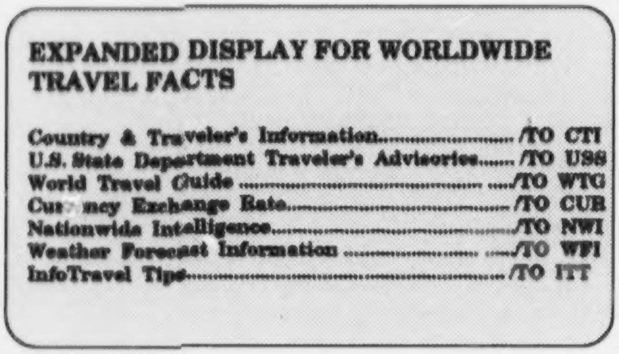
continued on page 8

and enters the command: **BEGIN OAG.** The following menu welcomes her.



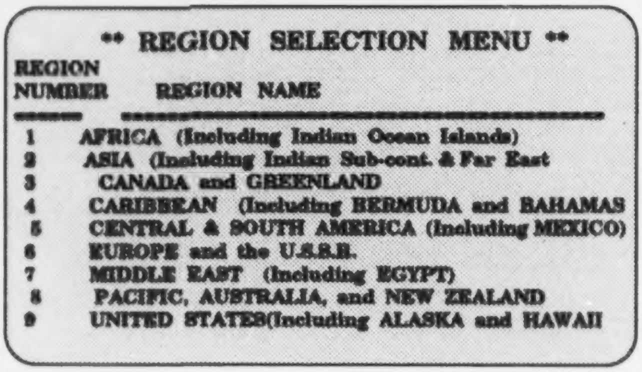
```
OFFICIAL AIRLINE GUIDE

WELCOME TO THE OAG ELECTRONIC EDITION
TRAVEL SERVICE

1  OAG ELECTRONIC EDITION - Flight
   Information & Reservations
2  Airport Arrivals, Departures & Gate
   Information
3  Weather
4  Lodging & Dining
5  Worldwide Travel Facts
6  Travel Industry News
7  Frequent Traveler Program
8  Leisure & Discount Travel
9  Cruises
10 What's New?
11 General & How-to-Use
```

Jaime selects item **#5 Worldwide Travel Facts** and is presented with an expanded display of the menu for that database.



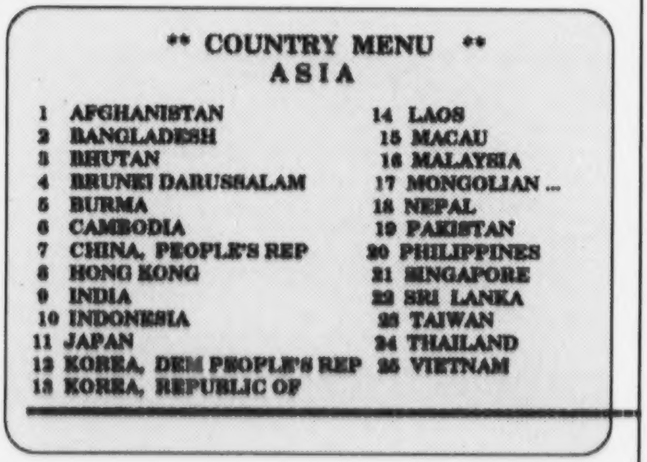
```
EXPANDED DISPLAY FOR WORLDWIDE
TRAVEL FACTS

Country & Traveler's Information......................../TO CTI
U.S. State Department Traveler's Advisories....../TO USS
World Travel Guide ................................................ ..../TO WTG
Currency Exchange Rate.........................................../TO CUR
Nationwide Intelligence............................................/TO NWI
Weather Forecast Information ....................... ..../TO WFI
InfoTravel Tips......................................................../TO ITT
```

From the above menu Jaime selects the command **/TO WTG**, which leads her to the World Travel Guide **REGION SELECTION MENU.**



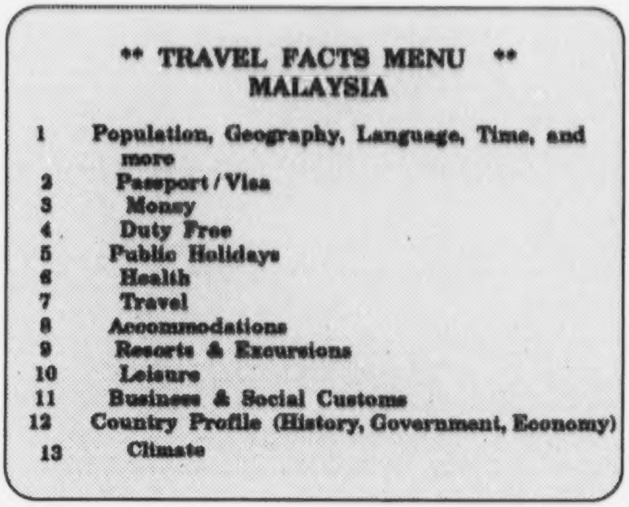
```
        ** REGION  SELECTION  MENU **
REGION
NUMBER     REGION  NAME
-------    -------------------------------------
 1     AFRICA  (Including Indian Ocean Islands)
 2     ASIA  (Including Indian Sub-cont. & Far East
 3       CANADA and GREENLAND
 4      CARIBBEAN  (Including BERMUDA and BAHAMAS
 5      CENTRAL & SOUTH AMERICA (Including MEXICO)
 6      EUROPE and the U.S.S.R.
 7      MIDDLE EAST  (Including EGYPT)
 8       PACIFIC, AUSTRALIA, and NEW ZEALAND
 9      UNITED STATES(Including ALASKA and HAWAII
```

Selecting the continent of Asia, **item no. 2,** from this menu, Jaime is immediately presented with the **Asia Country Menu.**



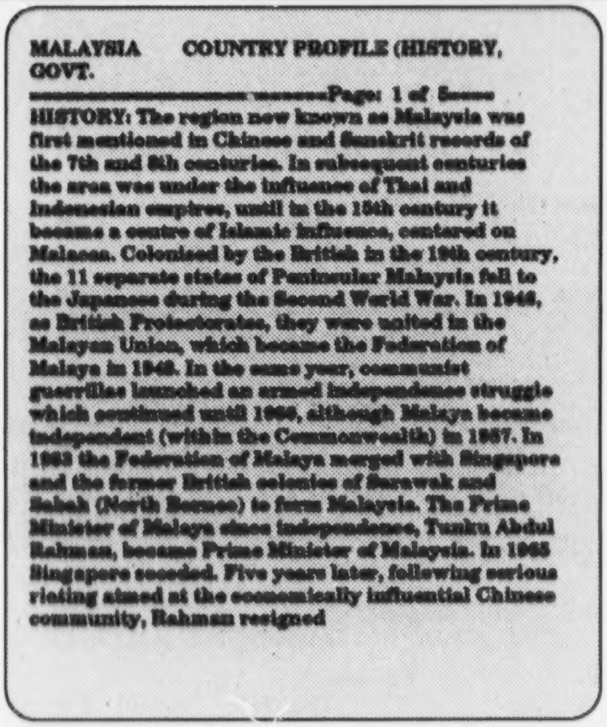
```
            ** COUNTRY MENU  **
                  ASIA

 1  AFGHANISTAN                  14 LAOS
 2  BANGLADESH                    15 MACAU
 3  BHUTAN                        16 MALAYSIA
 4  BRUNEI DARUSSALAM            17 MONGOLIAN ...
 5  BURMA                        18 NEPAL
 6  CAMBODIA                     19 PAKISTAN
 7  CHINA, PEOPLE'S REP         20 PHILIPPINES
 8  HONG KONG                    21 SINGAPORE
 9  INDIA                        22 SRI LANKA
 10 INDONESIA                     23 TAIWAN
11 JAPAN                         24 THAILAND
12 KOREA, DEM PEOPLE'S REP      25 VIETNAM
13 KOREA, REPUBLIC OF
```

As Jaime selects **item #16,** the OAG exhibits the target menu for the country of **MALAYSIA:**



```
        ** TRAVEL FACTS MENU   **
               MALAYSIA

 1    Population, Geography, Language, Time, and
         more
 2      Passport / Visa
 3       Money
 4      Duty Free
 5     Public Holidays
 6      Health
 7      Travel
 8     Accommodations
 9     Resorts & Excursions
10      Leisure
11     Business & Social Customs
12   Country Profile (History, Government, Economy)
 13      Climate
```

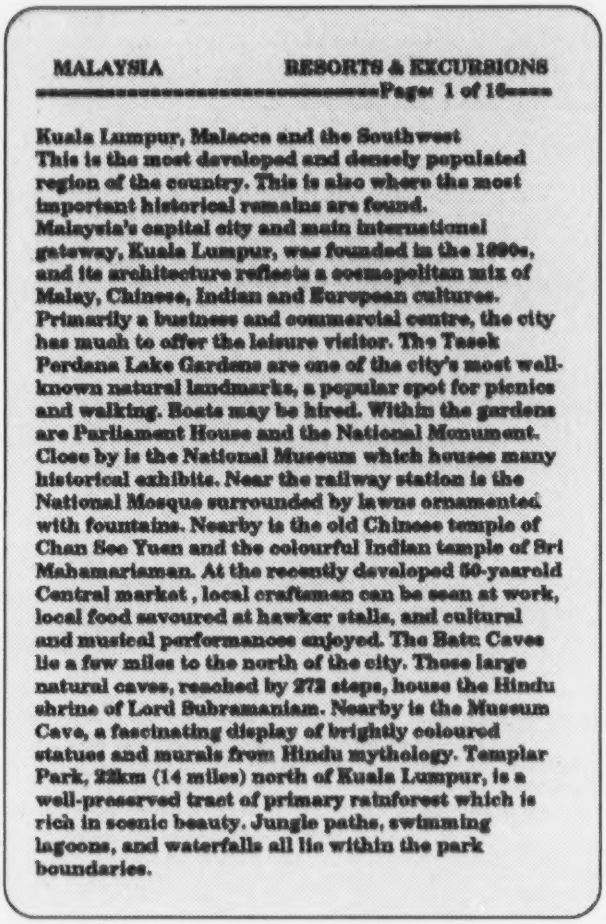
Jaime can return repeatedly to this menu and by simply pressing another number, retrieve up-to-date information full-text on all the topics for her report on Malaysia. Examples below are the **first pages** from the **Country Profile, History, topic 12, Resorts, topic 9, and Business, topic 11.**



MALAYSIA COUNTRY PROFILE (HISTORY, GOVT.

------------------------------------Page: 1 of 5-----

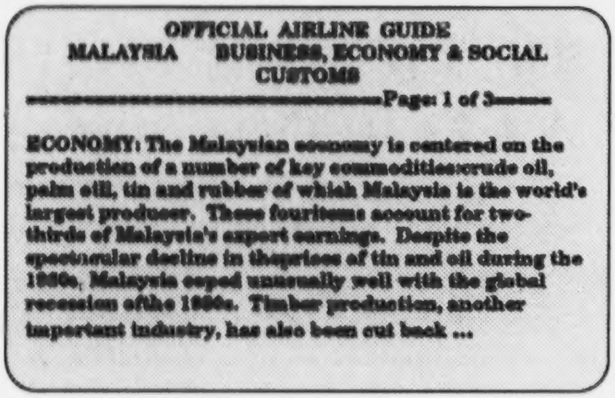
HISTORY: The region now known as Malaysia was first mentioned in Chinese and Sanskrit records of the 7th and 8th centuries. In subsequent centuries the area was under the influence of Thai and Indonesian empires, until in the 15th century it became a centre of Islamic influence, centered on Malacca. Colonized by the British in the 19th century, the 11 separate states of Peninsular Malaysia fell to the Japanese during the Second World War. In 1946, as British Protectorates, they were united in the Malayan Union, which became the Federation of Malaya in 1948. In the same year, communist guerrillas launched an armed independence struggle which continued until 1960, although Malaya became independent (within the Commonwealth) in 1957. In 1963 the Federation of Malaya merged with Singapore and the former British colonies of Sarawak and Sabah (North Borneo) to form Malaysia. The Prime Minister of Malaya since independence, Tunku Abdul Rahman, became Prime Minister of Malaysia. In 1965 Singapore seceded. Five years later, following serious rioting aimed at the economically influential Chinese community, Rahman resigned



MALAYSIA RESORTS & EXCURSIONS

------------------------------------Page: 1 of 16-----

Kuala Lumpur, Malacca and the Southwest
This is the most developed and densely populated region of the country. This is also where the most important historical remains are found.
Malaysia's capital city and main international gateway, Kuala Lumpur, was founded in the 1850s, and its architecture reflects a cosmopolitan mix of Malay, Chinese, Indian and European cultures.
Primarily a business and commercial centre, the city has much to offer the leisure visitor. The Tasek Perdana Lake Gardens are one of the city's most well-known natural landmarks, a popular spot for picnics and walking. Boats may be hired. Within the gardens are Parliament House and the National Monument. Close by is the National Museum which houses many historical exhibits. Near the railway station is the National Mosque surrounded by lawns ornamented with fountains. Nearby is the old Chinese temple of Chan See Yuen and the colourful Indian temple of Sri Mahamariaman. At the recently developed 50-yearold Central market , local craftsmen can be seen at work, local food savoured at hawker stalls, and cultural and musical performances enjoyed. The Batu Caves lie a few miles to the north of the city. These large natural caves, reached by 272 steps, house the Hindu shrine of Lord Subramaniam. Nearby is the Museum Cave, a fascinating display of brightly coloured statues and murals from Hindu mythology. Templar Park, 22km (14 miles) north of Kuala Lumpur, is a well-preserved tract of primary rainforest which is rich in scenic beauty. Jungle paths, swimming lagoons, and waterfalls all lie within the park boundaries.



OFFICIAL AIRLINE GUIDE
MALAYSIA BUSINESS, ECONOMY & SOCIAL CUSTOMS

------------------------------------Page: 1 of 3-----

ECONOMY: The Malaysian economy is centered on the production of a number of key commodities:crude oil, palm oil, tin and rubber of which Malaysia is the world's largest producer. These fouritems account for two-thirds of Malaysia's export earnings. Despite the spectacular decline in theprices of tin and oil during the 1980s, Malaysia coped unusually well with the global recession ofthe 1980s. Timber production, another important industry, has also been cut back ...

The students were captivated. First there was the irresistible lure of the computer -and, secondly, students were enthralled by the fact that they were accessing the same source of information used by the commercial airlines.

These students retrieved not only country information for their classroom contest-- their self-images scaled new heights from friendly, successful experiences with the computerized database - and the teachers were delighted with the results.

The OAG can be used successfully from upper elementary grades through high school - and beyond. The OAG is a sure-fire best-seller with students and teachers alike - we're all travelers at heart

Most students complete their online research in less than ten minutes. For less than $3.00 per student, here is a class activity that will cull student enthusiasm, garner praise and meet classroom objectives for any project in world cultures or geography.

The OAG is available through most of the major online services: Dialog, CompuServe, Dow Jones News/Retrieval, and NewsNet. Dialog and NewsNet services are available to schools at a flat educational rate of $15.00 per hour. CompServe has a new $7.95 per month flat rate for basic services, which includes OAG. For further information contact:

Dialog Information Services, Inc., 3460 Hillview Avenue, Palo Alto, CA 94304 (8000-3-Dialog)
CompuServe Information Service, 5000 Arlington Centre Blvd., Columbus, Ohio, 43220 (800-848-8199)
Dow Jones News/Retrieval, P. O. Box 300, Princeton, NJ 08543-0300 (609-452-1511)
NewsNet, 945 Haverford Road, Bryn Mawr, PA 19010 (800-345-1301)

Editor's Note: This article appeared in Media & Methods (Nov/Dec 1991) in abbreviated form.

The Presidents: It All Started With George
A CD-ROM Program for all Grade Levels

by Linda A. Singer, Information Systems Specialist, Fairfax County Public Schools, Virginia

National Geographic's **The Presidents: It All Started with George** enlivens the process of teaching students about the presidents and presidential elections. United States history is taught through **The Presidents** in a multimedia format all students (yes, all students; no age or grade limits need be applied) will enjoy using. The program is easy to use with the click of a mouse.

The Presidents CD-ROM program contains still pictures with interesting captions in each president's "photo album," an essay about each president, a "vote" section containing maps and other visuals about each presidential election, a timeline with historical facts from United States and world history, as well as trivia for each presidential term and an informative game that's fun. The sections, from Theodore Roosevelt on, have clips from speeches and motion picture frames. For important speech fragments of earlier presidents, there are National Geographic narrators. All speeches, captions and other text can be printed out. On each presidental main screen, there are icons representing the sections described above.

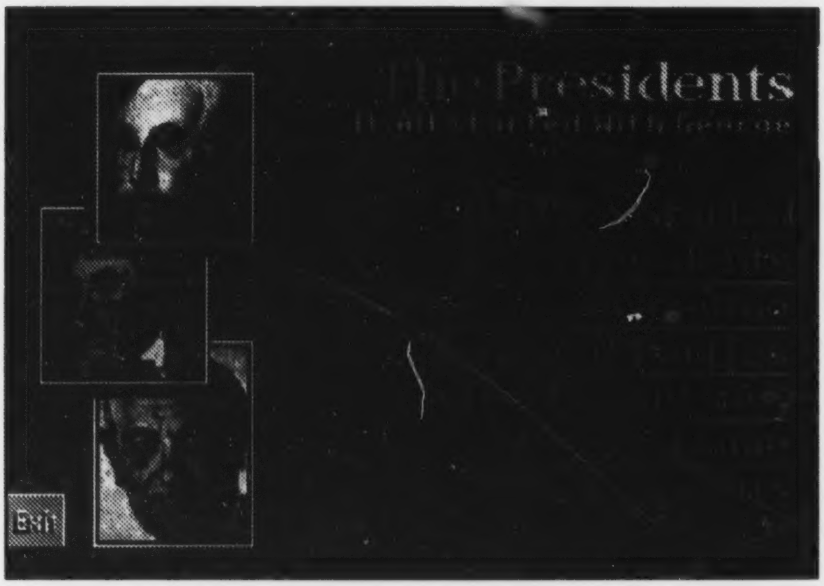


Figure 1 ***Main Menu***

The presidential main screens also contain "hot spots" from which information about political parties and vice presidents can be located. The program offers three photo essays: "Electing the President," "Presidential Power," and "Presidential Partners." These sound filmstrips, each with fifty frames or so, can be viewed when "automatic" is indicated by the user in "The Presidency" section. Also in this section are three maps: the Electoral College, the nation's growth, which is an automated map, and presidential birth places.

In constructing the timeline, the developers were very aware of the fact that all our presidents were white males. Attention was paid to including historical facts about women and minorities on the timeline. Topics, such as civil rights, can be traced through the timeline. Icons representing world events, U.S. events, sports, entertainment, music and literature are used on the timeline. Facts are presented by the written or spoken word and by still and motion pictures. The timeline can be accessed through the main, as well as individual, presidential screens and can be viewed from Washington's first term to midway through George Bush's.

Many features on **The Presidents** allow teachers and librarians to involve students in presidential politics. Using the photo album, timeline and presidential biographies students can prepare reports to share with classmates about a particular president and various events happening during his administration. Students who may have a difficult time reading longer biographies will have a great deal to add to any classroom discussion. This CD-ROM program, like so many others, lends itself to use by small groups, as well as by individuals.

Librarians and teachers can have students pick a presidential election, then check the "vote" section to see the states each candidate won and how many votes he received. Did the states won form a particular pattern? What other information does this section have on the election? If a president ran more than one time, have students compare the election results.

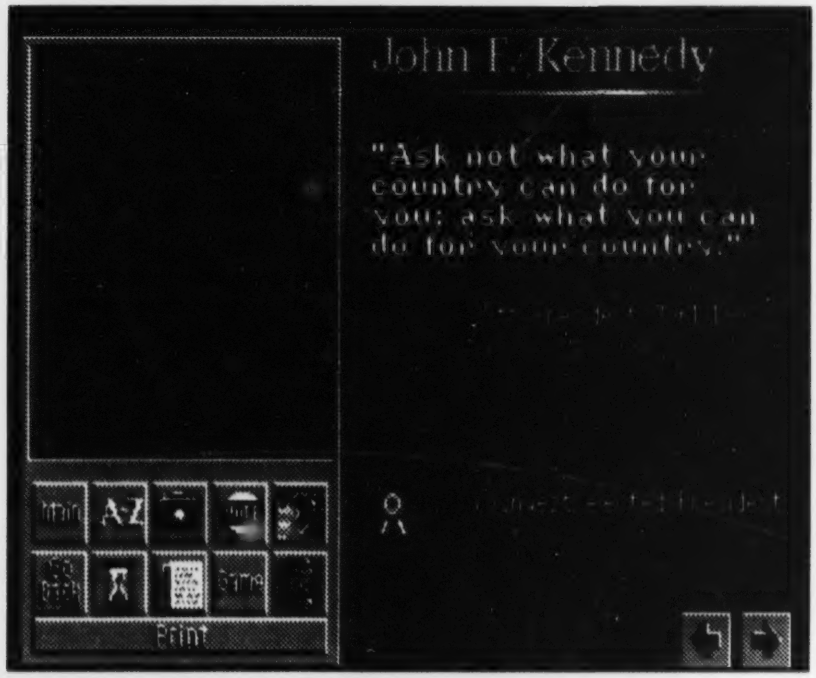
In the "political parties" section, students can find out which presidents were Republicans, which were Democrats. They also retrieve facts about each political party that has had a President in the White House and about other third parties that had presidential candidates.

The photo essays (film strips) can be viewed by small groups who can then report to classmates about electing the president and presidential power and partners.

Students need to be aware that presidential candidates did not always have television available for campaigning. Using the timeline, have students check under Washington's first term (first campaign buttons, 1789) and Franklin Roosevelt's first term ("FDRs Back Again" campaign song 1936) to find some unique facts and hear a really different song.

The Electoral College and presidential birthplace maps show students the number of votes each state has in the Electoral College and each president's birthplace. The birthplace map provides an interesting visual: it shows most of our president's were born in the Eastern part of the United States.

continued on page 12



"Ask not what your country can do for you; ask what you can do for your country."

Figure 2 ***JFK's Presidential Screen***

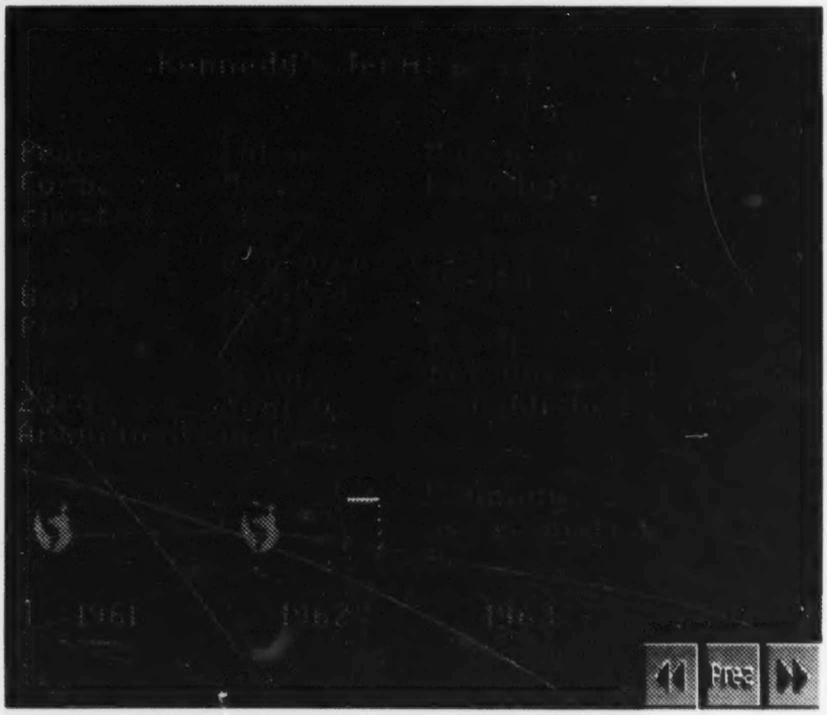


Figure 3 ***Timeline***

The Presidents...continued from page 11

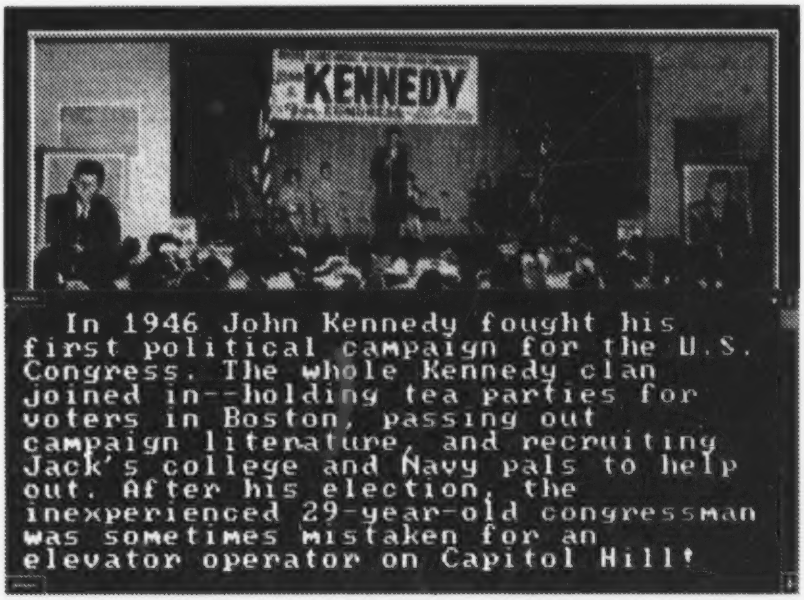
Some of our vice presidents became president, while most are forgotten. Checking on the vice presidents, students will find those who succeeded a president who did not complete his term, those vice presidents who ran for President, and those presidents who chose different running mates for second terms.

The Presidents: It All Started With George is delightful to use. It is National Geographic's second generation CD-ROM product and has several improvements over their ground-breaking, wonderfully colorful CD-ROM product, **Mammals**. These include the ability to have sound motion clips, captions for the sound motion clips and the ability to stop any sequence by clicking the mouse. It is recommended that a Hitachi 1700 series CD-ROM drive or its equal be used. There are some problems with using earlier generation CD-ROM drives equivalent to Hitachi's 1500 series when trying to view the sound motion picture clips.

There are no bigger bargains in education than the $99 price tags on National Geographic CD-ROM products. The quality one expects from National Geographic is one reason both **Mammals** and **The Presidents** are products any school library should have as part of its collection.

Election of 1960
Free

Figure 4 JFK's "vote" Section



In 1946 John Kennedy fought his first political campaign for the U.S. Congress. The whole Kennedy clan joined in--holding tea parties for voters in Boston, passing out campaign literature, and recruiting Jack's college and Navy pals to help out. After his election, the inexperienced 29-year-old congressman was sometimes mistaken for an elevator operator on Capitol Hill!

***Figure 5** A screen from JFK's "photo album"*

The program for The Presidents requires the following:

IBM PS/1, PS2, or 100-percent compatible computer wwith 640 K and VGA

Color Monitor(IBM PS/2 or compatible)
CD-ROM drive (IBM PS/2 or compatible)
Audio adapter (and associated speakers)
Printer (optional)
Necessary software includes DOS version 3.3 of higher and Microsoft CD-ROM Extensions version 2.10 or higher

Audio support programs are provided on the CD-ROM for the following adapters: IBM< PS/2 M-Audiao and Playback (/A); IBM PS/1 Audio/Joystick; Digispeech DS 201; and Soundblaster.

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The Internet: Pushing the Envelope of Current Knowledge

By Dave Swartz, Rocky Mountain High School, Fort Collins, CO
email on the Internet to:
dswartz@lobo.rmhs.colorado.edu

Imagine an Earth Science teacher describing to her class the constantly changing weather patterns of our atmosphere. Her objectives may include the understanding of weather symbols, the circulation patterns around high and low pressure systems, and the formations of warm and cold fronts. Traditionally, she may illustrate a filmstrip or movie that show these dynamic motions, use weather maps from textbooks or even include actual weather data from the National Weather Service mailed to her school.

But now add to that classroom images that were taken just minutes ago from a satellite orbiting 25,000 miles above the equator and official National Weather Service surface maps that are just as recent. She might even enrich her more advanced students by providing pressure maps and vertical cross-sections of selected areas. Her students could exchange questions with experts in the field. They would be thrilled to know they are working with the same information the local TV meteorologist will use to make tonight's forecast, even matching or surpassing the commercial forecast.

How does she get this data? What tool allows the introduction of such current information?

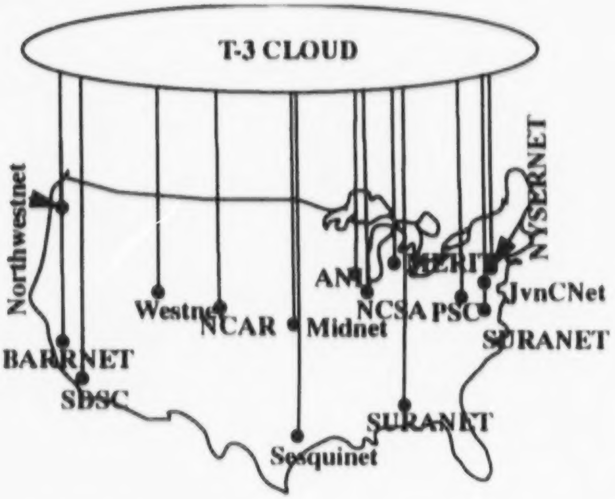

Figure 1 The NSFnet

She has access to the Internet, a high-speed computer network that is emerging as the information source of the decade and beyond.

A recent series of articles in MacWorld magazine (September 1992) pointed out the changing nature of technology in our public school systems and the failure of schools to prepare for the future. In the '60s and early '70s, it was the advent of TV; the late '70s and '80s, the introduction of personal computing, and now in the '90s, the race is to network the computing resources of a technological, information-rich society and to provide our students with what many call the new basics.

For the past two decades, computer networking has grown from simple analog modem connections to high-speed digital transmissions. The technology is in constant flux, becoming cheaper, faster, and better every day. Traditionally, this technology has been extensively used by the government, the military, industry and higher education almost exclusively.

The common thread is the emergence of the Internet, better referred to as the National Science Foundation NSFnet (Figure 1). It ties together many government, higher education and industrial research facilities involved in pushing the envelope of current knowledge. The NSFnet carries electronic mail, allows users in one location to control computers at distant facilities (known as telnetting) and provides the exchange of computer programs and files (File Transfer Protocol or FTP) between sites. True, all this can be done with modems, but the transmis-

continued on page 16

The Internet...continued from page 15

sion of complex images and large computer programs can take hours to accomplish at the relatively slow speeds that modems use. The NSFnet provides a high-speed "backbone" in the form of a wide area network (WAN) that allows regional and local area networks (LANs) to interconnect.

Our access to the Internet at Rocky Mountain High School is made possible by Colorado SuperNet, a non-profit corporation deploying networking in the state of Colorado. We have a relatively "slow" connection of 56,000 bits per second over a dedicated digital phone line, allowing the transfer of a complex color image in roughly seven minutes. Compare that to the current speed of the NSFnet backbone which allows the same image to be transferred in just a half-second (Figure 2). The advantage of this kind of connection compared to a modem is the speed-- minutes vs. hours. And being constantly connected, electronic mail delivery can occur at anytime of the day, automatically, without placing long-distant calls to relay information.

So what can you do with the Internet? At a recent workshop sponsored by the Department of Energy and taught at Colorado State University this summer, students and teachers were introduced to the network's potential. They were taught the basics of electronic mail, using it to communicate with individuals and with sites that will mail back requests for documents, such as the Bill of Rights or even full texts of books. They used FTP to access images and programs that are considered public domain or shareware. They used such services as "Archie" and "WAIS", two recent resources developed to help locate the vast amount of information available via the Internet. The accessed UseNet, a public bulletin board system that has thousands of topic areas ranging all the way from computers to politics to sports and recreational activities. The participants learned how to access NASA's SpaceLink via the Internet, eliminating the costly phone calls via the phone systems to Alabama needed otherwise. They learned basic programming in C, developing models for population studies and then actually running large data sets through a Cray Super computer at the National Center for Atmospheric Research in Boulder. At the end of the week-long seminar, everyone involved agreed that the potential found over the Internet had just barely been explored, and all participants felt empowered by the experience.

"Imagine, too, their own participation in developing experiments or surveys that could help in some of this research--not only be consumers of information, but producers as well."

At Rocky Mountain High School, Mr. Tom List, Political Science instructor, uses the Internet to reach the General Information Repository at the University of Maryland. There, his students are able to access full texts of speeches given recently by the U.S. Presidential candidates and to study their position papers. Ken Bledsoe, World Cultures instructor, uses the email capabilities to communicate with a high school in Japan, helping his students understand the cultural diversity that exists throughout the world.

Glenn Gray, Journalism instructor at Rocky, has his students exchange stories and ideas with others from around the country via the Cleveland FreeNet, a unique telecommunications experiment which sponsors Academy One, a K-12 student exchange bulletin board on the Internet. My Environmental Studies class is able to exchange email with students who live in many different environs and take part in conversations on UseNet about current environmental topics. And the number of teachers wanting to participate keeps growing.

A K-12 Networking and Computing Newsletter

If you are interested in learning more about the Internet, subscribe to this new bimonthly newsletter dealing with computing and networking in public education edited by Pat Burns, Department of Mechnical Engineering, Colorado State University and Dave Zachmann, Department of Mathematics, Colorado State University. Vol.1 no.2, May 1992 issue featured a concise, user-friendly explanation of the Internet. Figures 1 & 2 in Dave's Swartz's article are from that issue.

This four-page newsletter is FREE . If you want to be added to their mailing list just send you name, address, affiliation, phone number and electronic mail address (if you have one) to Dave Zachmann, Department of Mathematics, Colorado State University, Fort Collins , CO 80523 (303)491-1575, dzach@Darcy.visColoState.EDU

Picture your students being able to communicate with a wide variety of current research experts and having access to their most recent works. Imagine, too, their own participation in developing experiments or surveys that could help in some of this research--not only be consumers of information, but producers as well. The Internet is the tool that can help make this possible.

As with any new technology, there is controversy surrounding the Internet and its deployment into the K-12 community. One major obstacle that many schools and school districts face is the cost. Concern has been raised as to the have schools versus the have-nots. And agreeably the channeling of resources away from basic needs, like classroom supplies, textbooks and even equitable pay for employees, raises a few eyebrows.

In October of 1991, Congress passed and President Bush signed into law the High Performance Computing Act, which directed federal funds for the conversion of the Internet to the National Research and Education Network (NREN), and included deployment of this technology into the K-12 arena nationwide. This will help with some of the funding, but schools will need to take on the responsibility of ownership by providing some monies and personnel to help the average classroom teacher implement this new technology. Too often technology is purchased and then just sits on the shelves because all the costs are not considered.

Which leads to another controversy regarding how the network would be utilized: Should the curriculum be developed, implemented, and assessed before the network is widely deployed? Instead of imposing a rigid curriculum would the "Field of Dreams" philosophy of "build it and they will come" allow for a more creative emergence of ideas and exploration of the potential of this new technology.

A third controversy is the appropriateness of some of the material currently found on the Internet. Anything and everything seems to be available, including questionable material for children and young adults. Should access be all-encompassing or should efforts be made to limit what students can use? Should a separate area of the network be developed just for K-12 schools?

Controversy aside, one thing is clear. We need to provide the tools of tomorrow to our students today to help prepare them for the inevitable. Technology doesn't wait for the rest of the world to catch up; those individuals who can access this technology prosper. Those of us fortunate enough to have access now know we are just at the tip of the iceberg. If more individuals can participate, the resulting synergism would help propel all of us even further toward the 21st century.

Our public schools have met great opposition to such ideas. "Get back to basics!" we are told. But these are the basics of tomorrow, as well as key tools to help the U.S. educational system excel. When will it come to your schools? Who will pay for such technology? Important questions, but more important, what will it cost if we don't have the skills and resources necessary for global competition in the next millennium?

Name	Raw Circuit Speed	Speed	Transmission Times		
		Words/Min.	Color Picture	The Bible	Encyclopedia Brittanica
T-3	45 Mbps	67,000,000	0.5 Sec.	1.2 Sec.	60 Sec.
T-1	1.544 Mbps	2,000,000	15 Sec.	36 Sec.	30 Min.
56 kbps	56 kbps	75,000	7 Min.	16 Min.	13 Hrs.
14.4 kbaud	14.4 kbaud	19,000	1/2 Hr.	1 Hr.	2 days

Figure 2 ***Transmission Types and Speeds***

Socrates II....continued from page 1

I'm goin to hear--right out loud-- "Soc, my man, you got it all wrong again."

See it's my own personal research assistant-- my Main Man here's got what the ad-dudes call intelligent knowledge navigation, finding information through instantaneous wireless communications in comprehensive databases. *Which, translated, means, it don't get no more NOW than this!*

I also got here a hand-held computer--back in antiquity you called them palm tops. Its talkie manual tells me it combines the portability of a hand-held business calculator with the power of the desk top PCs. Cool, eh what? Ten ounces is the max, and look, MOM no keyboard! See, I rap with it with my pen or my voice--voice for text and pen for pointing or crossing out an' such. Keyboards have been history since the century flipped over--we use 'em only on book players.

Book players, do I hear your ask? Throw an eye at my hip pouch.

These days me and the other scholarly dweebs either add interactive cd drives to our computers or we use the electronic book players the school lays on us. See, the textbook is also history--we get these weeny little CD's instead. Check 'em out--in my pockets: they're el-cheapo, reusable, keyboard-interactive and even individualized for each class.

I gotta get more professional-like now--so you get the technology, I'll rap to you in '90-speak, I can get my computer to translate from me to you. Her's how it works:

Each school district has a central production unit, in which cd discs can be mastered and personalized to each class. The teachers chooses the chapters which can be placed in any order, special requests for current articles can be scanned into the system and added (with copyright permission, of course). Massive photocopied sheets are obsolete.

> ***"Libes are very fresh, man--I just don't have to get physical about them. I don't need to hang there like my ancestors."***

The system is interactive. Students can add data through voice technology or mark certain passages or sections of the text with pen point technology. In this way notetaking is integrated to the content. Notes can even be shared, saving work.

The new cd textbooks use hypermedia, which has helped the textbook become more relevant to students. Hot buttons offer fast and easy access to definitions of words and pop up windows explain concepts in depth.

The computer screen resolution of these bookmans is so good, students rarely have the need to print out text. Information is easily transferrable to small palm top computers, family home communication center and the bookmans.

Access to wireless telecommunications is universally available. Students can receive email messages from friends, corrected reports from teachers, stock market quotes for economic classes, and up-to-the-minute news reports for social studies discussion classes.

Access to the school library is the same way, modem when outside the school building and through the school network when on campus. All classrooms and buildings in the school district are networked.

All of this is accomplished by using a radio modem, housed snugly in the computer; plugging into phone jacks has been eliminated. Computers are set on "host ready" mode. When the secure, crush-proof case is opened a blinking cursor or a sound of the student's choice will alert him to new messages.

Y'know, new messages like words to the Wimp from Momster, "Soc, Dentist at 4. Be there."

And, as for messages like words to myself, viddy my MacWrist here--Momster calls it the ultimate Dick Tracy fashion accessory; me, I think its more in the Batman mode. 'Course it's really just a souped-up Seiko with a two-line LCD computer screen, a cable and some real happening software. From my computer to the watch, via the cable, I can download all kinds of def data--phone numbers, addresses, Nike styles, "Dead" tunes, rap lyrics, even a memo. MacWrist came out in 1991;they went for $139 at you local SearsReebok.

Yo, enough said, library chicks and chaps. You get the happening scene--the school libe is a PROCESS, like my MAIN process, always available. Cool action, the walls came tumbling down and the libe is everywhere now. Later dudes, see you in the future, we'll rap on the internet.

Editor's Note:

This article is based on a presentation I gave at the New Hampshire Library Media Institute in August. Louise Wollman, a gifted writer and friend translated the speech into Socrates' rap. As Soc would say, "This WriterChick is real fresh, like dope, man." Correspondences to Socrates can be addressed to Louise at the Information Searcher.

Campaign '92

By Joyce Rudowski, Computer Teacher, Cincinnati County Day School, Cincinnati, OH

Getting young people to vote is no easy task. Each year since 1971 the percentage of eligible voters, 18-20 years old who vote, has declined. Confusion over the process, perceived adult apathy, lack of knowledge of the candidates, confusion over the issues and the seemingly unimportance of "just one vote" are the major reasons why young voters stay away from the polls.

This year electronic network projects have been organized to assist young voters to learn about their right and responsibility to vote.

Campaign '92 appears on freenet systems in Ohio and Illinois, but geography is not a barrier to participation in the project. The freenet systems are accessible to anyone who has an account on the internet. The internet is the electronic highway that connects computers and their users all over the country. The freenet systems, sponsored by communities, universities and commercial organizations, are the scenic stops along the way. Information and communication are the hallmarks of internet contact.

The special appeal of the **Campaign '92** project is that focus on information for new voters as they approach this presidential campaign. The menus for the project include biographical information on the candidates, candidate position papers, voter registration information, interactive "discussions'" of national issues,and mock elections on both the issues and the candidates. There is also historical perspective of the right to vote, quotable quotes for the campaign and encouragement for our youngest voters.

Campaign'92 is available on the following freenet systems;

Trusted Online - operated by Cincinnati Bell Directory, Cincinnati, Ohio:
* Connect directly in the southwest Ohio area by dialing: 579-1990.
* Connect through the internet by telnet to tso.uc.edu.
- - -**Campaign'92** is found in the Learning Center area.

Cleveland Freenet - operated at Case Western Reserve University, Cleveland, Ohio:
* Connect directly in the northwest Ohio area by dialing: 368-3888.
* Connect through the internet by tenet to freenet-in-c.cwru.edu.
- - -**Campaign'92** is found in the Academy One area.

The specifics of the two projects vary slightly, but their thrust is the same: Get out the vote! For additional information about **Campaign'92** or network assistance call Joyce Rudowski, Cincinnati County Day School, 513-561-7298.

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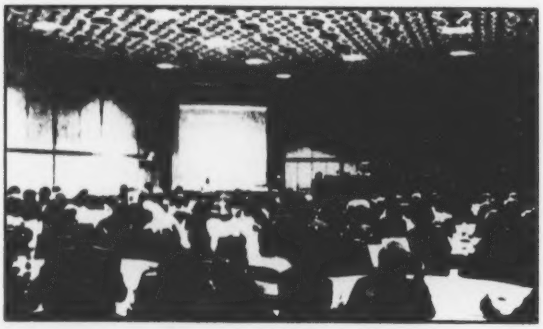

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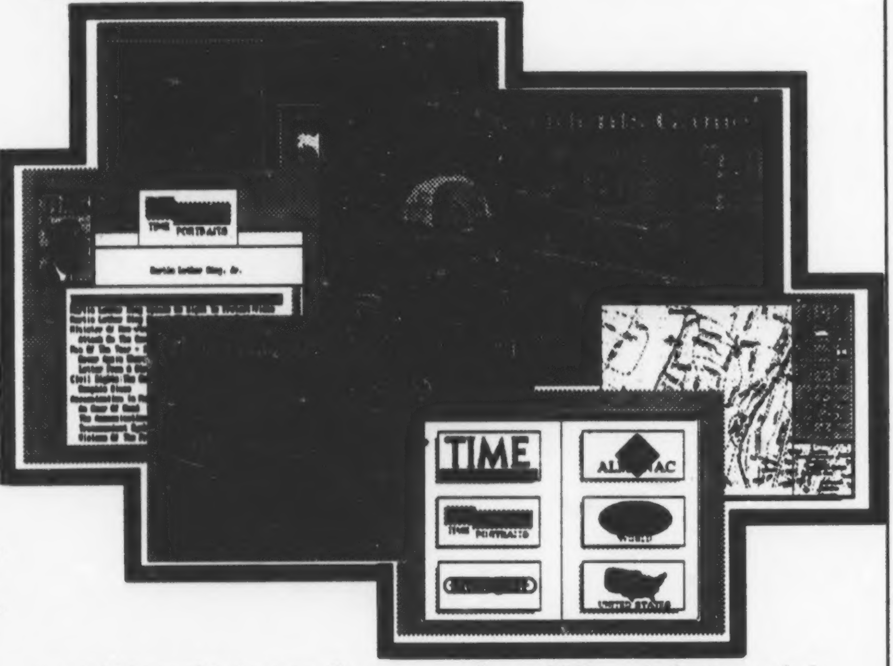
CD-ROM: The Technology Impacting School Libraries

By Pam Berger,
Editor, ***Information Searcher***



It isn't a breakthrough in information delivery to report to all of you out there in the field that CD-ROM is impacting school libraries. The depth and breadth of its influence might, however, come as a surprise. This relatively new technology is changing how we do business in school libraries, dramatically impacting library management, collection development, the instructional program, and the curriculum. Journal articles, conferences, presentations and discussions with librarians demonstrate not only ardent acceptance of CD-ROM, but a dawning awareness of some underlying problems and issues regarding CD-ROM's use and integration in schools.

History

CD-ROM, first announced in 1983, became commercially available in 1985 with the appearance of a cataloging resource called **BiblioFile.** It entered the school market with the introduction of **Grolier's Electronic Encyclopedia,** which was announced in 1986 and became available along with Microsoft's **Bookshelf** in 1987.

Its capacity for storage is impressive: 600 megabytes of data -- that's 300,000 pages, one million catalog cards, one hour of sound, or 15,000 graphic images. Students can now search ten years of a magazine index in one shot, without incurring the price of online charges.

In addition to storage capacity, other advantages that make it a natural for school libraries are: faster and easier access to information, immediate feedback, increased opportunity for students to explore information, increased language and problem solving skills and confidence building.

Paul Nicholls, writing in **CD-ROM Professional,** provides a chronology of CD-ROM's growth: In 1987 there are 120 titles available. Of these, 50% are indexing and abstracting databases, costing $1295 for an index on CD-ROM, $950 for a source database and $3475 for a directory type. By 1988, 200 titles are available, with prices remaining relatively constant. The OCLC "Library Equipment Survey" shows that 44% of OCLC libraries are implementing CD-ROM. School libraries join in by trying out the new technology with **WILSONDISC** and **TOM.**

In 1989 DATABASES IN SCHOOLS Conference, the first major conference devoted to the teaching and use of online and CD-ROM data-

continued on page 4

PROCESSING NOTES *from the Editor*

CD-ROM can be confusing. It's powerful, but slow. It's the preferred searching format of most students, but many CD-ROMs can't be networked to offer multiple access. It's receiving a lot of media coverage, but critical reviews are hard to find. And then there are the different types of CD's -- CD-ROM, CD-ROM XA, CD-I, Photo-CD, CD-Audio...Help!

This issue will help you maneuver through the technology maze. The lead article places CD-ROM in context, reviewing its short history and offering predictions of its future impact. Susan Kinnell gives practical advice on how to buy a CD-ROM drive in her article on page . Once you have passed that hurdle, look at our list of CD-ROM's, "Nineteen Reasons to Search CD-ROM." This list is not exhaustive, we will be adding many more in future issues, but it's a good place to start. Also check out "Coming Attractions." Let your faculty know about new CD-ROM's in their subject areas. Talking about new titles -- Linda Singer had a sneak preview of National Geographic's new CD-ROM atlas. It sounds like another award winning title from NG and IBM on Linkway! Be sure to See **Mammals** and **Presidents,** their first two titles, if you haven't already done so.

New York University's Bobst Library developed an award-winning online instructional services program. Lise Dyckman details the program in the Networking column. They utilized "self-destruct" passwords which can be used very effectively with individual classes or departments to control online costs.

Don't miss Debbie Squire's report on DATABASES IN SCHOOL'92. Integrating technology, multimedia, and Internet were some of the hot topics this year.

Lastly, share your experiences and opinions about CD-ROM with us. We have included a feedback form with this issue. Please take a few minutes to fill it out and let us know what CD-ROM programs you are using, with what grade levels, what subjects, what curriculums etc. Let your voice be heard! Flood my mailbox! Yes!

Pam Berger

National Geographic Society Announces *Picture Atlas of the World*

By Linda A. Singer, Information Systems Specialist, Fairfax County Public Schools

National Geographic's third generation CD-ROM program, **Picture Atlas of the World** is soon to be released. National Geographic has added enhancements to **Picture Atlas of the World** not found in its previous CD-ROM programs, **Mammals** and **Presidents.** One of the enhancements is the use of IBM's Linkway Live!, which according to National Geographic's staff, requires at least 2MB RAM. So beware -- your 30-286 computers and earlier models may not be able to function with this atlas unless additional MBs of RAM are installed.

If your CD-ROM station has 2MB RAM, then you are indeed lucky for **Picture Atlas of the World** is a superb addition to the CD-ROM software world. There are maps featuring the road systems; sightseeing highlights of specific towns, cities or areas of a country; distances between various places within a country as well as standard political maps.

Picture Atlas of the World is a must for schools with students for whom English is a second language. These students will be thrilled to see pictures of their homelands, hear its music and its language. They will want to share this information with their classmates. Place students in cooperative learning groups with a student from the country being studied as its leader and all students will benefit from the experience. How often have our foreign born students been able to take ownership of assigned projects in school? This program gives them such an opportunity.

For each country there are video and movie clips with sound as well

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MAIN MENU

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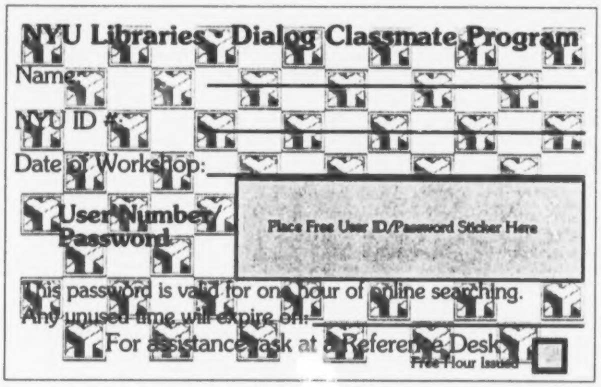

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This password is valid for one hour of online searching.
Any unused time will expire on: __________
For assistance, ask at a Reference Desk.
Free Hour Issued ☐

By Lise Dyckman, Instructional Services Librarian, Bobst Library, New York University, NY

What if you offered all of your students access to the wide world of online databases - - not just to those in a specific class, not just those working with an enthusiastic teacher, but to all students with the interest, inclination, need, curiousity or gumption to learn online searching? How could you administer such a project and justify it to those who talk budgets and cost accounting? How could you teach the techniques of online searching to those whose search topics would be literally, all over the map? Well, judging from New York University's experience, it can be done.

The Plan

New York University's libraries are fairly centralized; the Elmer Holmes Bobst Library serving as the main resource for information in a very wide range of subjects and disciplines, from cinema studies to history, social work to chemistry and physical therapy. Unfortunately, computerized information sources don't cover as wide a range of topics as the library offers. Currently available, CD-ROM resources cannot entirely satisfy all the demand for electronic information at Bobst Library. For one thing, equivalent CD-ROM resources in all our major subject areas do not yet exist. Even to begin attempts to provide such resources would have taken a King-Kong-sized bite out of an already-besieged collections budget. Given such constraints, we looked for other ways to offer access to computerized resources. Online technology provided that alternative. With a reasonable initial investment, we could offer access to over 100 databases at once, through Dialog Information Services' Classmate program.

From the outset, we decided to offer Classmate to a very wide audience and not to limit participation to one department, school or class. Since Dialog stipulates that Classmate must be used in an educational setting, we required students and faculty to attend on online search techniques workshop, which qualifes them for a Classmate password. Though our librarians also offer "on demand" workshops for specific classes or departments. Most of the more than 600-plus searchers trained at NYU attended one of a series of weekly walk-in workshops. Participants in open workshops are from any department at any academic level, and at all levels of computer competency. Having attended a workshop, participants may receive Dialog Classmate passwords, each of which are valid for one hour of search time. Bobst Library pays for each participant's first hour of searching. Subsequent hourly passwords are offered at the library's cost.

The Reality - - Project History

Dialog Classmate debuted at Bobst Library in 1991 as a pilot program in the first half of spring semester. Search workshops and 100 one-hour passwords were offered. As the attendance was high and the response enthusiastic, we added seven additional workshops in the semester's second half, and ordered another 200 passwords. By the semester end, 333 people attended workshops and 157 hourly passwords were distributed. After completion we sur-

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CD-ROM...continued from page 1

bases in schools, debuts in Chicago. At this time there are 500 commercially available products and less than one-third are geared specifically to indexing and abstracting. Forty-five percent of all applications are now source databases containing full text, numeric data or computer programs. And prices are coming down: $1200 for an index, $497 for a source database and $1699 for a directory type. To reflect the rapidly expanding CD-ROM database sector, **Online Searcher** itself changes its name to **Information Searcher.**

Compton's Multimedia Encyclopedia, the first wide-distribution multimedia CD-ROM product, joins the 1200 commercially available CD-ROM databases in 1990. School librarians choose from a limited choice of titles, mainly print-based reference sources, such as Facts on File, **McGraw Hill Science and Technical Reference Set on CD-ROM, Peterson's College Database, ERIC, Webster's Ninth New Collegiate Dictionary.**

Articles begin appearing in education and school library literature. In a cover story for **Electronic Learning,** Therese Mageau discusses the technology of CD-ROM and videodisc and new versus old publishers. Donna Baumbach in **School Library Media Quarterly,** lists the advantages of CD-ROM: speed, motivation, feedback, confidence skills, increased opportunities to explore information and ease of compiling bibliographies. She calls CD-ROM a school library media specialist's "dream come true!"

In **Electronic Learning,** Roxanne Mendrinos reports on two case studies at the school level,

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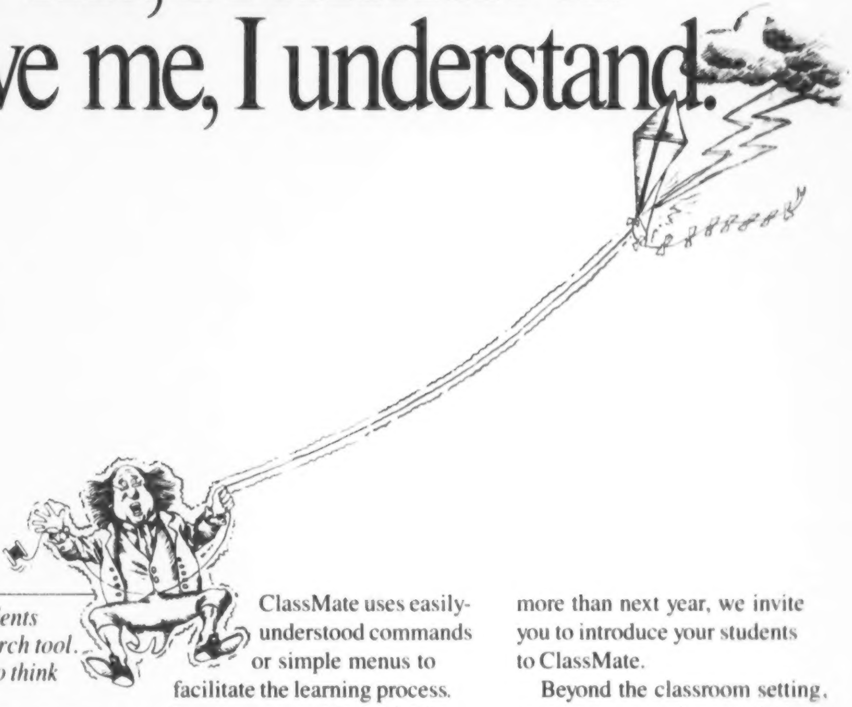
Educators' CD-ROM Award Presented to National Geographic Society and EduQuest/IBM

The Educators' CD-ROM Award was presented to National Geographic Society and EduQuest/IBM Corporation at the opening ceremony of the DATABASES IN SCHOOLS '92 Conference in Chicago, IL. The award winning program, **Presidents: It All Started With George,** is a multimedia, interactive encyclopedia on CD-ROM that offers students a new look at the personal and political lives of our 41 Presidents.

The Educators' CD-ROM Award, sponsored by the **Information Searcher,** recognizes a CD-ROM product for its excellence in design, high degree of interactivity, innovativeness, and unique contribution to K-12 education.

Tell me, I forget.
Show me, I remember.
Involve me, I understand.

Ancient Proverb



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CD-ROM...continued from page 4

telling us "How CD-ROM Has Made Two High School Libraries Vibrant Information Centers." Her enthusiasm is clear: "Search and critical-thinking skills strategies used in CD-ROM information access and retrieval are preparing Queen Anne and Lewiston students for the 21st century." The students and faculty considered CD-ROM "indispensable," she adds.

In 1991, a widespread acceptance of CD-ROM occurs. The discussion shifts from "Should we buy CD-ROM titles?" to "Which CD-ROMs are best for the school library?" There are now 1980 titles available commercially; however, less than 100 are applicable for use in schools. There are five or more choices for a magazine index on CD-ROM, three encyclopedias, and many single titles: **Guinness Disc of Records, DisLit:American Authors, U.S. History of CD-ROM, Great Literature, Mammals: A Multimedia Encyclopedia** and more.

School Library Journal features an article by Elizabeth Bankhead, in which she discusses the major issues facing school librarians who are integrating CD-ROM technology: assessment planning, funding options, management strategies and long-range planning.

The **CD-ROM Directory** reports 2908 titles in 1992, with 2105 titles using IBM platform and 601 titles using Apple platform. There are now a variety of interesting titles for the school curriculum (see annotated listing page 8) and a large number of CD-ROM distributors. (see sidebar page 4)

Recognition of the technology is clearly established at the 1992 DATABASES IN SCHOOLS Con-

continued on next page

Coming Attractions

American Indian Multimedia Encyclopedia. **(DOS) Fact on File. Spring 1993**

A multimedia guide through the rich cultural history of American Indian tribes, leaders, original documents and American Indian legends. It will include over 1000 pictures, sound, maps and will have full boolean searching capability. The encyclopedia will cover major geographic regions and language families and span more than four centuries of details and insights into the American Indian imagination and folklore.

Cool Jazz. **Compton's New Media. (MPC) Recently released.**

A complete chronology of jazz music and its masters with text, photos, videos and selected recordings from 1923-91, incorporating top quality CD audio, as well as video recording segments of legendary jazz musicians. a musical journey from the origins of jazz to the vibrant electric sound of today's music.

DISCovering Authors. **Gale Research Inc. January 1993 (DOS/MAC)**

Contains biographical information and full range of critical opinions on 300 of the most-studied authors from all time periods --from Aristotle to Maya Angelou. Each author entry includes lengthy excepts of commentary by approximately five to six literary criticism, biography, personal career information, bibliography of writings, media adaptations and sources for further readings.

Microsoft Encarta. **Microsoft Inc. (MPC)**

Complete 29 volume set of 1992 Funk and Wagnalls New Encyclopedia encompassing 25,000 articles and 17,000 multimedia elements including 350 jazz, classical and world music segments, hundreds of birds and animal sounds, over 100 readings of authors, and samples of more than 45 languages, 1000 maps and charts and 100 interactive charts.

The Grammy Awards: A 34-Year Retrospect. **(MPC) Compton's New Media. Winter 1992/3**

A complete database of winners and nominees of the Grammy Awards demonstrating America's musical tastes and interests over more than three decades. Includes award winning music in every category, every year since the beginning of the Grammy Awards, by name, award,

continued on page 19

CD-ROM...continued from page 6

ference in Chicago. At the opening session, **Information Searcher's** Pam Berger presents the first Educators' CD-ROM Award to the National Geographic Society and EduQuest/IBM for **Presidents: It All Started With George.** In addition, the conference features an all day pre-conference devoted to the selection and evaluation of CD-ROM.

For the second year in a row, a children's product receives a major award: **CD-ROM Professional** honors Discis Books for its product, **The Tale of Peter Rabbit.** The previous year, **Mammals: A Multimedia Encyclopedia** produced by the National Geographic Society and EduQuest/IBM, won the award.

Education journals start including articles about successful CD-ROM networking, use of electronic encyclopedias and magazine indexes. CD-ROM Librarian initiates a school column written by Catherine Murphy to address the issues from a school perspective: funding, curriculum, age appropriate, information skills, document delivery.

The Future

Librarians, along with patrons in public, academic and special libraries, predict CD-ROM technology will be the format of choice "CD-ROM is clearly the information technology and format of greatest popularity in libraries today," reports John Berry, Editor of **Library Journal.** In a CD-ROM market study for **LJ**, Cahners Research finds 126 public libraries that offer CD-ROM software expect to spend an average of $13,533 on CD-ROM software; 128 academic libraries expect to spend $10,519; and 55 special libraries in the sample will spend an average of $8,162. Sixty-three percent of the three types of libraries sampled offer CD-ROM.

"CD-ROM is the medium of the moment in libraries. If the Cahners CD-ROM Market Study is any indication, it promises to stay in that commanding position for several years," says Berry.

New education titles are appearing every month: some are from traditional print publishers, like Gale Research Inc. in Michigan and many more are from new electronic publishers, such as Electronic Bureau in New Jersey.

At present, the greatest need is for more detailed and critical reviews of CD-ROM, to document not only various quality of information and technical details, but also to discuss curriculum integration and age appropriateness.

School librarians should be involved in the development of CD-ROM. It's important to take an active role: Review CD-ROMs for local, regional and national publications, share your opinion of what makes a good product for schools. Watch how students interact with the technology, notice if your information skills' teaching strategies are changing and in what way. Observe how your faculty reacts to CD-ROM products. Last, make copies of the CD-ROM Feedback Form included in this issue, talk with faculty and students and give **Information Searcher** feedback on your experiences and ideas regarding CD-ROM.

Ask a Scientist -- Online

"Ask a Scientist" service allows callers to leave questions for experts in physics, computer science and math, or read the questions and answers of other callers. Called Newton, the service is for anyone teaching or studying science, mathematics, computer science or technology in any grade. Begun this fall by the U.S. Energy Department's Argonne National Laboratory in Illinois, Newton offers teachers classroom and field trip ideas, online conferences with experts, science education event calendars and access to several publications.

To access Newton, set your communications software to eight databits/no parity/full duplex specifications. Call the bulletin board direct at (708) 252-8241 or access it through Internet.

For more information, contact Argonne National Laboratory, 9700 South Cass Ave., Argonne Ill. 60439 (708) 252-5584

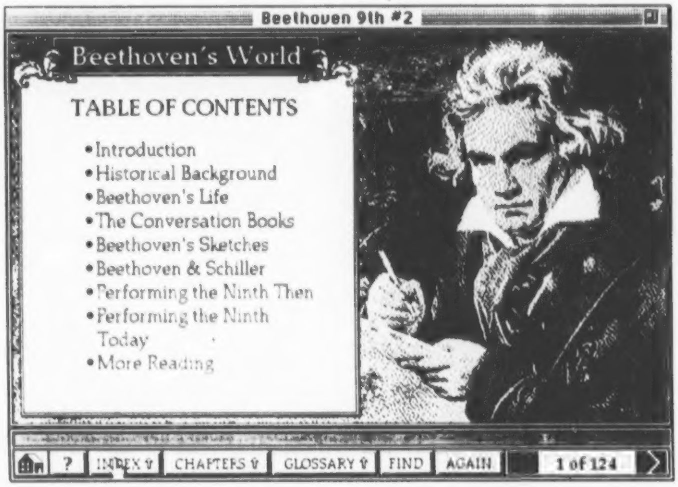
Nineteen Good Reasons to Search CD-ROM

By Pam Berger and Susan Kinnell, Co-Authors, *CD-ROM in Schools: The Definitve Handbook* (pub. date: Fall 1993)

Exotic Japan

Publisher: The Voyager Company
1351 Pacific Coast Highway
Santa Monica, CA 90401
Telephone: 310-451-1383
Price: $99.95 MAC

Description: Interactive introduction to the language, culture, and society of Japan. Includes lessons, quizzes, a game, maps, and pronunciation. Traditional music and woodblock prints are part of the program's background and setting.



Beethoven's World

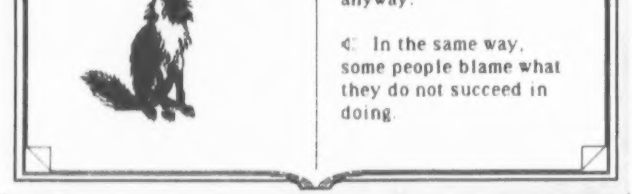
TABLE OF CONTENTS

- Introduction
- Historical Background
- Beethoven's Life
- The Conversation Books
- Beethoven's Sketches
- Beethoven & Schiller
- Performing the Ninth Then
- Performing the Ninth Today
- More Reading

Beethoven Symphony No. 9

Publisher: The Voyager Company 1351 Pacific Coast Highway
Santa Monica, CA 90401
Telephone: 310-451-1383
Price: $99.95 MAC

Description: A five-part exploration of one of the world's greatest symphonies; examines the music, the score, the individual instruments, as well as the life and times of Beethoven.



So, he went off, saying to himself "The grapes were sour, anyway."

In the same way, some people blame what they do not succeed in doing.

Aesop's Fables

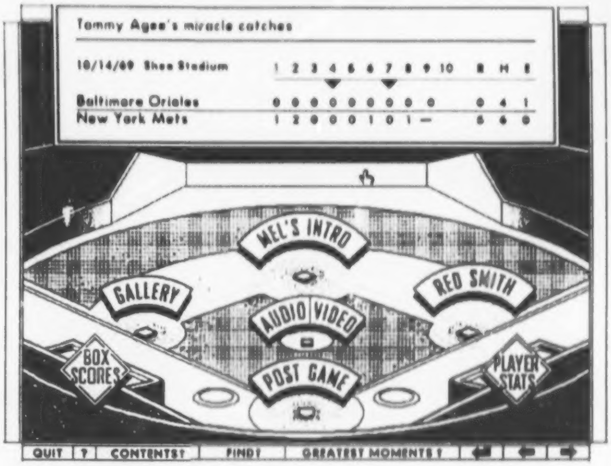
Publisher: Discis Knowledge Research, Inc.
NYCCPO Box 4509 5150 Yonge Street
Toronto, Ontario, Canada, M2N 6N2
Telephone: 800-567-4321
Price: $49.95 MAC

Description: Ten classic fables in book form. Excellent for beginning readers. Sound, color, graphics, and presentation are excellent. Original 1912 illustrations by Arthur Rackham.

Amanda Stories

Publisher: The Voyager Company
1351 Pacific Coast Highway
Santa Monica, CA 90401
Telephone: 310-451-1383 Price:$59.95
MAC DOS

Description: Ten stories of Inigo and Your Faithful Camel. Full-color animations, sound, and charming story plots. Interactive component allows user to select path of adventure.



Tommy Agee's miracle catches

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New York Mets	1	2	0	0	0	1	0	1	–		5	6	0

MEL'S INTRO
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RED SMITH
AUDIO VIDEO
BOX SCORES
POST GAME
PLAYER STATS
QUIT
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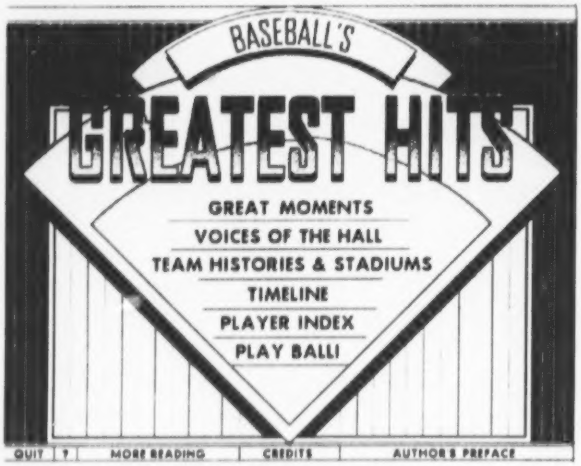
CONTENTS?
FIND?
GREATEST MOMENTS?



BASEBALL'S
GREATEST HITS
GREAT MOMENTS
VOICES OF THE HALL
TEAM HISTORIES & STADIUMS
TIMELINE
PLAYER INDEX
PLAY BALL!
QUIT
?
MORE READING
CREDITS
AUTHOR'S PREFACE

Baseball's Greatest Hits

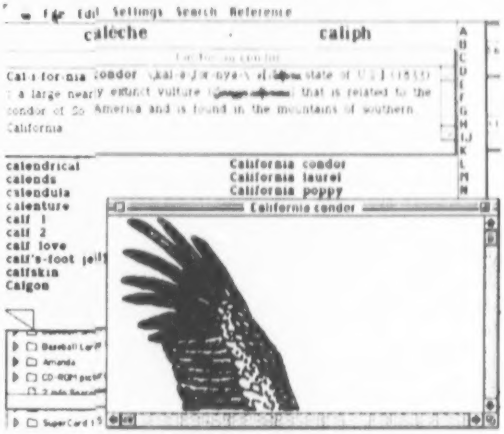
Publisher: The Voyager Company
1351 Pacific Coast Highway
Santa Monica, CA 90401
Telephone: 310-451-1383 Price: $79.95 MAC

Description: 65 of baseball's greatest moments, featuring introductions by Mel Allen, sportscasters at the events, video clips where available. Also has hundreds of photographs, lifetime player statistics, complete team histories and rosters, and a baseball trivia game.

A Silly Noisy House

Publisher: The Voyager Company 1351 Pacific Coast Highway, Santa Monica, CA 90401
Telephone: 310-451-1383
Price: $59.95 MAC

Description: A tour through a house full of furniture, games and toys, hidden passages, and fantasy sequences. Loads of sound effects and animation. No text, excellent for non-readers or pre-readers. Superb color, sound, and graphics.



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calf's-foot jelly
calfskin
Calgon
California condor
California laurel
California poppy
California condor

Cal·i·for·nia condor \ka-lə-for-nyə-\ [illegible] state of U.S.] (1835) : a large nearly extinct vulture ([illegible]) that is related to the condor of So America and is found in the mountains of southern California

Webster's Ninth New Collegiate Dictionary

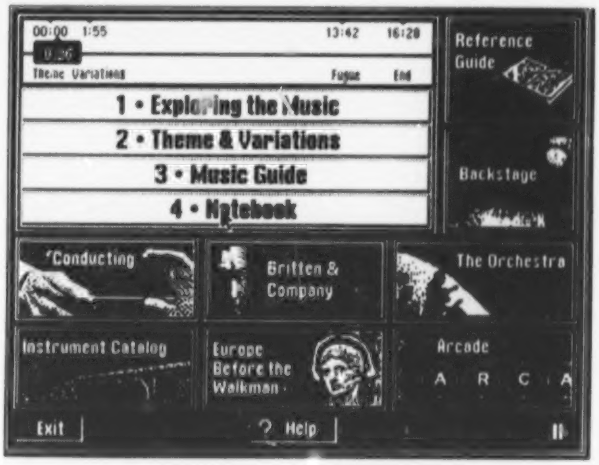
Publisher: Highlighted Data, Inc.
4350 North Fairfax Drive, Arlington, VA 22203-1620. Telephone: 703-516-9211.
Price: $189 MAC

Description: Contains the full text of the print version of this dictionary: 160,000 entries and 200,000 definitions. Entries are dated, and each word is pronounced-excellent for ESL students! Other features include choice of type sizes, cross-references and a thumb guide for quick access.

The Orchestra

Publisher: Warner New Media
3500 West Olive Avenue
Burbank, CA 91505
Telephone: 818-955-9999
Price: $79.98 MAC

Description: Contains the full score of Benjamin Britten's "Young Person's Guide to the Orchestra," as well as an instrument catalog, four musical games, a conducting lesson, and all of the themes and variations from the Britten work. The sound is superb,and the graphics and color add to the overall presentation.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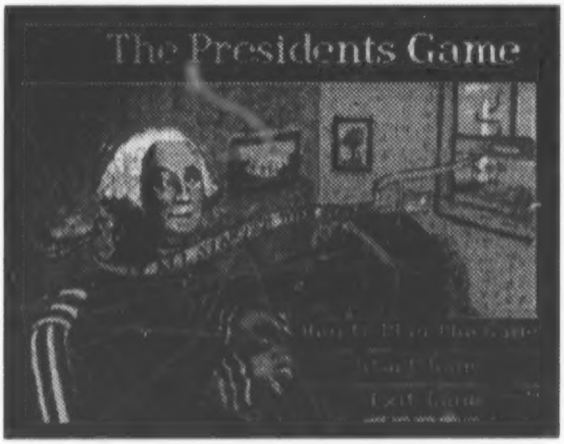
Theme Variations Fugue End
1 • Exploring the Music
2 • Theme & Variations
3 • Music Guide
4 • Notebook
Reference Guide
Backstage
Conducting
Britten & Company
The Orchestra
Instrument Catalog
Europe Before the Walkman
Arcade
A R C A
Exit
? Help


The Presidents Game

The Presidents: It All Started With George.

Publisher: National Geographic Society & EduQuest/IBM.
NG, 1148 17th Street, NW, Washington, D.C. 20036-4688
Telephone: (202) 857-7000 Price:$ 149 DOS

Description: From George Washington to George Bush, this multimedia program offers a new look at the 40 men who have held the nation's highest office.Includes more than 1,000 captured full-screen photographs, 33 video clips, multimedia timeline, famous presidential speeches, political party index, narrated photo essay on the Presidency and the political process, election facts, figures and maps and presidential trivia game and word-search function.

Books in Print Plus

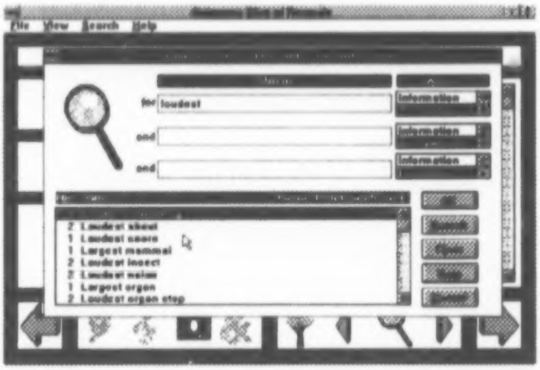
Publisher: Bowker Electronic Publishing 121 Chanlon Road, New Providence, NJ 07974-1154
Telephone: 800-323-3288 Price: By subscription MAC DOS

Description: Contains bibliographic information on all currently published US books. Searchable by title, author, ISBN, publisher, year of publication, grade level, and keyword.

The Guinness Disc of Records.

Publisher: Unidisc, Inc. 4401 Capitola Road, Route #4,
Capitola, CA 94010 Telephone: Price: $149
DOS MPC MAC

Description: Based on the best selling book, this disc provides full text searching, 300 color photographs of record breaking feats, a musical score and sound effects. Listen to the fastest backwards talker, the loudest animal or view the most expensive movie prop!. Search by chapters, key word or browse through the records.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for loudest
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2 Loudest shout
1 Loudest snore
1 Largest mammal
2 Loudest insect
2 Loudest noise
1 Largest organ
2 Loudest organ stop

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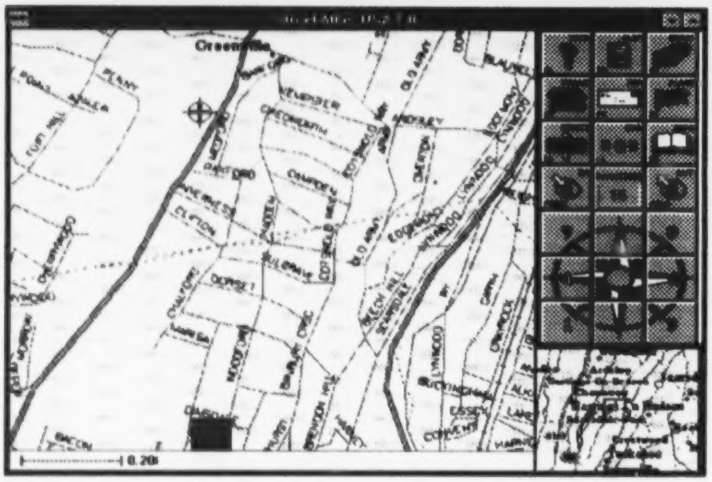
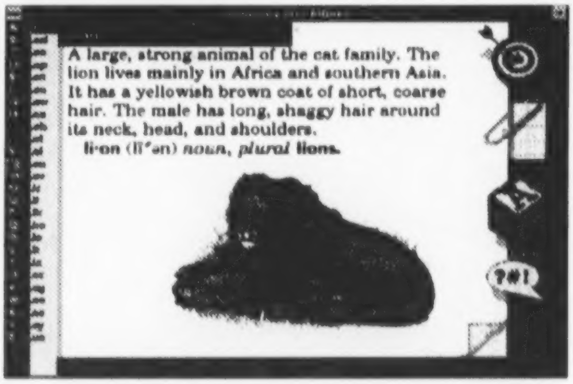
950 UNIVERSITY AVENUE BRONX NY 10452

Street Atlas USA

Publisher: DeLorme Mapping. Lower Main Street, Box298, Freeport ME 04032
Telephone: (207) 865-1234
Price: $149 DOS

Description: This program contains comprehensive, seamless maps of every state -- every street in every city, town, and rural area in the entire country. Also city and town names, road names, railroads, mountains, lakes, rivers, streams and more. Location is by street name, telephone area code, zip code or place name. Offers distant and zoom-in close-up views of maps which can be exported to Paintbrush and printed. Easy and fun to use!





A large, strong animal of the cat family. The lion lives mainly in Africa and southern Asia. It has a yellowish brown coat of short, coarse hair. The male has long, shaggy hair around its neck, head, and shoulders.
li·on (lī′ən) *noun, plural* lions.

Macmillian Dictionary for Children

Publisher: Macmillian New Media, 124 Mt. Auburn Street, Cambridge, MA 02138
Telephone: (617)661-2955, ext 34 Price:$59.95 MPC

Description: Browse through the almost 12,000 word entries, 1,000 illustrations and 400 sound effects or let Zak, the personal tour guide of this multimedia dictionary show you around. He'll demonstrate how to scroll through the Word List, use the "Go To" function to find a word right away, keep your own personal list of words, or play one of the games -- spelling bee, or hangman!

Annabel's Dream of Ancient Egypt

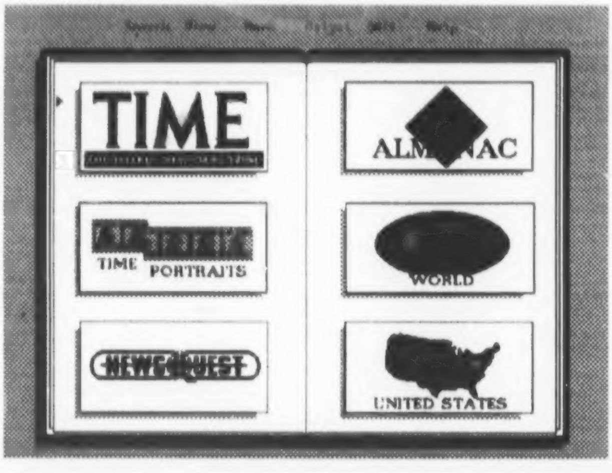
Publisher: Texas Caviar, 39933 Steck Ave., B-115, Austin, TX 78759
Telephone: (512)346-7887 Price: $85 DOS MAC

Description: A CD-ROM Gateway TM Story, this original children's story for young readers and older children introduces Annabel the cat and her sister. Inspired by her dream of Ancient Egypt, Annabel comes to terms with her sister's teasing while learning about Egypt and its history. The story and music of the opera Aida and ways of coping with childhood anger and teasing are woven into the story. It includes instructional word and comprehensive games, hieroglyphics translator and portrait gallery for story ideas and coloring.

TIME Magazine Compact Almanac

Publisher: Compact Publishing, 5141 MacArthur Blvd, Washington, D.C. 20016
Telephone: (800) 964-1518 Price: $195 DOS

Description: This disc covers almost all curriculum areas with reports of events from 1989 to September 1991. Includes 10,000 articles, maps and almanac, CNN Newsroom's quarter-screen video clips, the 1991 CIA World Factbook, tables from the *USA Statistical Abstracts* and Newsquest, a current events quiz. There are also multimedia portraits with photo essays on such figures as Henry Ford, Adolf Hitler, Albert Einstein, Martin Luther King, John F. Kennedy and leaders of the women's movement.

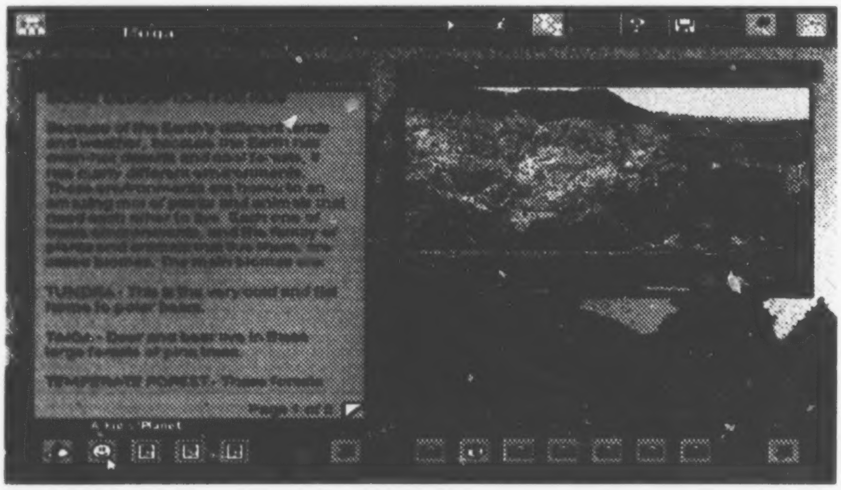


Heart, The Engine of Life

Publisher: Updata Publications, 1736 Westwood Blvd,
Los Angeles, CA 90024
Telephone:(800) 882-2844
Price:$99 DOS

Written by physicians for lay people, students and teachers, this disc is an animated color tutorial that interacts with the user while teaching, questioning, and testing on aspects of the human heart. Learn about chamber of the heart, the body's circulatory system, veins, valves and arteries. Put a heart together, perform a bypass operation , take the heart anatomy quiz and more.

Left Ventricle



The Animals!

Publisher: Software Toolworks, Inc. 60 Leveroni Court, Navato, CA 94949 (415) 883-3000
Price: $119.95 DOS MPC MAC

Description: A lively collection of San Diego Zoo exhibits grouped by natural habitats called biomes. Choose to visit the animals that live in one of the earth's major climate zones, experience a multimedia tour of the zoo, hear fascinating animal stories in the Storybook Theater, learn about care for the very young in the Animal Nursery, play games in the Kids Corner--all by clicking on the habitat map!. The program includes over 80 video clips with synchronized sound, over 1300 color photographs, 2500 pages of animal and habitat description, articles and scientific data, and 2 1/2 hours of audio.

Columbia's Granger's World of Poetry

Publisher: Columbia University Press, 136 So. Broadway, Irvington, NY 10533. Telephone: (914) 591-9911 Price: $699 DOS

Description: Contains the Columbia Granger's Index to Poetry and the full text of 8,500 classical poems, 3,000 quotations from 1,500 additional popular poems indexing from 550 anthologies with full descriptive and evaluation of nearly 400 most important anthologies. Anthology citations from 60,000 poems by 17,000 poets on 4,000 subjects. Searchable by author, subject, title, first line to by key word in its title, first line or full text.

Mammals: A Multimedia Encyclopedia

Publisher: National Geographic Society & EduQuest/IBM
NG,1148 17th Street, NW, Washington, D.C. 20036-4688
Telephone: (202) 857-7000 Price:$ 149 DOS

Description: From aardvark to zorilla, this multimedia encyclopedia offers hours of fact and fun. Includes 700 full-screen color photographs of more than 200 different animals, 150 range maps, vital statisitcs, fact boxes, essays equivalent to over 600 pages of text, 45 full-motion video and 155 animal sounds.

DATABASES IN SCHOOLS '92
Stresses Integration of Technology

Dr. Dale Musser, EduQuest/IBM, demonstrates how easy it is to incorporate photos into Linkway Live!

By Deborah L. Squire, Chair, Library Dept, Pelham High School, Pelham, NY

"DATABASES IN SCHOOLS comes of age" was the message delivered by conference organizer, Pam Berger, at this year's DATABASES IN SCHOOLS '92 conference in Chicago. How does she know? Because, as she told the audience, conference participants are leaders and risk-takers among school library media specialists, they are innovative and they are now being cited in the professional literature.

After Berger's welcome came the presentation of this year's Dialog awards, which were announced by Pat Tierney, President, Dialog Information Services, Inc. Lise Dyckman, Instructional Services Librarian, Bobst Library, New York University in New York City accepted the First Place Award. *(See page 16 for details on the award and page 3 for info. on NYU's online program)*

Keynote speaker Jan Hawkins, Director, Center for Children & Technology, Bank Street College, stressed that "technology needs to be part of the conversation regarding change in the schools." How do we plan for that change? According to Hawkins, we must first ask a series of questions to determine whether a school is successful: Is thinking stressed? Do students and teachers help each other learn? Are students and teachers motivated? Is the environment responsive to learning changes? And, do students learn more? When fitting technology into educational change within a school, it's not just the types, but also the capacities, of technology that are important. Again, Hawkins suggested the questions for consideration: How will it (technology) help you solve problems? How will it be organized? How will it facilitate communication? And, how does it promote creativity? Hawkins gave her audience a lot to think about.

The remainder of the first day's morning session was devoted to examples of programs that integrate online databases into the science and social science curricula. Linda Jackson, Science teacher, and Deborah Squire, librarian, both from Pelham High School, Pelham, NY, discussed how two inexpensive but powerful online databases are used in their 9th grade Earth Science classes. Students access real-life, real-time data on world-wide seismological activity from the National Earthquake Information Center in Colorado, using a toll-free 800 phone number. They also collect real-life, real-time weather information from WeatherBank in Utah at minimal cost. The data from these sources is then analyzed using a graphics program.

Mary Jane McNally, Librarian, Ridge High School, Bloomfield, NJ, uses Dialog and Dow Jones for projects in the social sciences--history, economics, psychology and English classes. Her goals include a combination of skills in online searching, writing process and word processing. Conference participants left the morning session with several specific lesson plans for use in their home schools.

The mid-day break for lunch and exhibits also included a fine series

continued on next page

of poster sessions and product presentations. The opportunity for hands-on examination of new programs and products is an essential part of the conference. It's also a great time for librarians to network and share different ways of using products.

After lunch on Day One, Delia Neuman, Associate Professor, University of Maryland, College Park, presented the preliminary results of the first part of a national Delphi Study. The study examines the problems and potential solutions associated with high school students' use of electronic databases. In other words, "What are the most important things for students to know?" An initial finding suggests that new information analysis skills need to be developed. Hopefully, Part II of this study will help identify some directions for us to take.

Linda Singer, Information Systems Specialist, Fairfax County Public Schools, Virginia, followed with a "cookbook" of suggestions for developing a successful online and CD-ROM program. Singer explained the twelve-step process used in the nearly 200 schools in Fairfax County. Elements of the plan include staff development workshops with ongoing users' group support, special funding allocations to support Dialog searching, K-12 emphasis, an interlibrary loan program, plus presentations to administrators and parents to engage further support. Day One ended with the annual Dialog reception--another wonderful opportunity for networking, visiting and sharing.

Anne Caputo, Manager, Acdemic Programs, Dialog Information Services (right) presenting Lise Dyckman, Bobst Library, New York University with the Excellence in Online Education First Place Award.

Day Two of the conference began with the delicious annual H.W. Wilson continental breakfast. This was followed by a look at the future, with an exciting demonstration of Link Way Live! by Brock Stanton and Dr. Dale Musser, EduQuest. This is an interactive multimedia database management system. The goal of this electronic library Stanton said, "is to extend the possibilities," combining audio, video, stills, and text. It encourages the creation of portfolios through the building of multimedia folders.

Then it was back to the present, with current events information and full-text sources presented by Anne Caputo, Manager, Dialog Academic Program and Reva Basch, Aubergine Information Services. Caputo offered a comprehensive review of full-text online and CD-ROM sources. Basch provided an overview of search tips and tactics for efficient and effective searching of full-text databases. For example, beware that currency varies; it's better to

continued on next page

Conference...continued from page 15

use proximity searching rather than "and"; and be sure to consider differences in transliteration and preferred spellings.

The morning proceeded with a discussion of the guidelines introduced for evaluation of CD-ROM packages selected for California schools. The major challenge, according to Ann Lathrop, Associate Professor, California State University/Long Beach and Kathleen Foss, Media Specialist, Los Alamitos High School, CA, is "teaching generically, because kids are faced with a variety of systems." Another issue concerns the amount of teacher support material required for CD-ROM programs to be considered.

Thanks to Linda Singer, the morning ended with a surprise demonstration of the then-still-unreleased National Geographic **Picture Atlas of the World** on CD-ROM. It looks like a fabulous product. Watch for it in January '93.

Success stories are always uplifting and that's exactly what we got from Irene Clise, Media Specialist, and Christopher Cooley, Technical Coordinator, both from Timberline High School, Lacey, WA. They described the installation of a CD-ROM network in their five-building high school campus. The network serves 1600 students and 100 staff via 310 IBM computers, supported by 12 servers. In addition to the technology, a major component of the program is extensive staff inservice.

John Clement, Director K-12 Networking Project, EDUCOM, told us about Internet as part of a discussion regarding the building of a national network community. He described the potential and the applications as well as the issues and obstacles.

In closing, Gene Dunne, Marketing Manager, Ameritech Services, outlined Project Homeroom, in which six Chicago schools were linked by phone and computer to the students' homes. Students and parents were able to access bulletin boards and information databases, as well as communicate via E-mail. A participating school administrator commented, "Current public discussion about the restructuring of education is leading to a broader definition of schooling. Finding relevant ways to restructure the learning experience is the focus of this exciting opportunity."

This year's pre-conference offerings were again very practical and well done: 1. Crash course for beginners: online & CD-ROM, 2. The CD-ROM challenge: evaluation, selection & curriculum integration, and 3. CD-ROM networking opportunities in schools.

DATABASES IN SCHOOLS was once again a well-organized conference with a broad range of topics presented by quality speakers. The schedule offers a good balance of activities and time for networking and sharing. Again, I would highly recommend this conference to any school library media specialist. Mark it on your calendar for next year: Nov. 1-3, 1993 in Washington DC. You owe it to yourself, your school and your students.

New York University Wins Dialog's Excellence in Online Education Award

Dialog Information Services, Inc. has named the Bobst Library, New York University the First Place winner of its annual Excellence in Online Education Awards. The first Place Award consists of a plague and $2,000 of online connect time to be used in the Dialog Classmate Instruction Program (CIP) of the winner's choice.

Dialog's President, Pat Tierney presented this year's award to Lise Dyckman, Instructional Services Librarian at the Bobst Library, NYU at the DATABASES IN SCHOOLS '92 conference held in Chicago, Illinois. A reception for the DATABASES IN SCHOOLS '92 attendees was held that evening.

In addition, two schools will receive awards of Merit, and Honorable Mentions will go to two other schools. Awards of Merit, granting $1,000 of online connect time in the Dialog Classmate Instruction Program of their choice, went to Camas High School in Camas, Washington and LaSalle University, Connelly Library in Philadelphia, Pennsylvania.

Honorable Mention recipients, awarded $500 of online connect time in the CIP program of their choice, were: University of Wisconsin, Steenbock Library in Madison, Wisconsin, Hampshire College in Amherst, Massachusetts and Douglas Middle School in Douglas School District, Ellsworth Air Force Base, South Dakota.

Dialog's Excellence in Online Education Award competition was initated in 1987 to recognize and honor schools making creative and innovative use of online information retrieval in their curricula. The first award, for the 1987-88

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What You Really Need to Know About Buying a CD-ROM Drive

By Susan Kinnell, University of California at Santa Barbara, Santa Barbara, CA

So you've decided it's worth it, you've convinced the school administration, and now you have to decide what CD-ROM drive to buy. What's the next step? As with any major hardware purchase, there's no substitute for research--read everything you can, talk to other people who have purchased already, browse around in stores and computer departments. Ask questions, think about it and then ask some more.

This article is written with the first-time buyer in mind and is merely an attempt to give you some of the questions to ask, some of the necessary terms (jargon)to understand and some of the things to look for. First, regarding this purchase you will be making, I am assuming that you already have a computer that you will connect to your CD-ROM drive and that you are not now contemplating an internal drive.

If neither of these assumptions fits your situation, look at the huge range of available choices. An internal CD-ROM drive is cheaper than an external drive, but you must be able to install it inside your computer. (By the way, all Mac CD-ROM drives are external.) If you discover your existing computer is, shall we say,"d'un certain age," you might want to consider upgrading the entire package. A lot of the newer models of multimedia computers have built-in CD-ROM drives, making the whole process of installation unnecessary and your life a lot easier.

If the computer you have is elderly, one like an 8088-type (the old workhorse PC XT variety), then buying a sleek new fast CD-ROM drive isn't going to do you much good. (Sort of like putting fat, radial racing tires on a Model-A...) The computer is responsible for much of the interaction with the CD-ROM drive and if it's slow, the interaction with the drive will also be slow. Think, then, about upgrading your entire system. You won't be sorry.

> ***'If the computer you have is elderly, one like an 8088-type (the old workhorse PC XT variety), then buying a sleek new fast CD-ROM drive isn't going to do you much good."***

Returning to our assumptions. Although I'm a Mac person, I know most of you out there are working with IBM-PC or PC-compatible systems. The truth is that most of the CD-ROM titles available now are in PC format, although the cloud of dust on the horizon is definitely Mac Cavalry-- so look out! Because the PC world is a little trickier in the hardware department than the Mac world, we will focus on PC hardware here.

So, where do we start? First, ask yourself, your faculty and staff how this CD-ROM drive is going to be used. Will it be in a library setting? A classroom? Do you want to get a network going sometime in the near future? Will it be used by students only; students plus faculty, staff, administration; or by a combination of all those? Are your users knowledgeable or are they novices? Have they ever done online searching?

In addition, don't forget to ask about your equipment budget: What's your technology budget? Will it be possible to expand to more drives, more computers, networking? Will you be able to buy enough CD-ROM discs to justify all that hardware expense? Remember to budget items such as extra caddies (the plastic tray that the disc goes into before you insert it in the machine), speakers, headphones and cables.

You don't need to know much about the mechanical workings of a drive (do I hear a faint "thank goodness"?) before purchasing. In fact, very little about a CD-ROM drive is mechanical. The small door over the opening, the eject mechanism and the motor that spins the disc are about it. The rest of the drive runs with electro-optical components--i.e., no moving parts, meaning relatively little can "break." In the electronics industry

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CD-ROM Drive...

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this is called "Mean Time Between Failure" [MTBF]; it's a measure of your unit's reliability. MTBF is expressed in thousands of hours; for example, MTBF = 15,000. (It's here I begin wandering off, picturing thousands of CD-ROM drives running in some lab, with white-coated people recording how long it takes one drive to break down. And the average is 15,000 hours?! How do they figure that out anyway?! Meanwhile, I personally have never met anyone with a broken drive. If you do, let me know. OK?

If reliability isn't really an issue, what is? Speed is one. Speed of access, and speed of transfer.

When you've inserted a disc and you're looking for a piece of information on it, you put in a search query, click on a button, or type in a word, whatever. The light on the drive goes on, the motor hums and you wait till a result appears on your screen. The first part of a search is how fast the drive gets to your information's exact location on the disc. That's access time. Transfer is the time it takes for that information to be transferred to your computer screen. The access time for today's new drives ranges between 200 and 380 milliseconds. For this measure, the smaller number is better -- that is, the fewer number of milliseconds it takes to access the data, the better. (Note that CD-ROM drives are not fast by other standards in the computer world. A hard disk drive accesses information in 15 to 50 milliseconds.)

Transfer time is measured in how many kilobytes per second (kbps) of information are passed from the disc to the computer. According to the article in NewMedia, of the 26 drives tested, 5 had a transfer time of 300 kbps and the rest had a transfer time of 150. The 150 transfer time is the current industry norm and, as the technology improves, there will be more and more 300 kbps times. Here, the bigger number is better--more data gets passed from the disc to the computer faster. Again, this is slow by other computer standards: the hard-drive transfer rate is 600-800 kbps.

"The access time for today's new drives ranges between 200 and 380 milliseconds. For this measure, the smaller number is better--that is, the fewer number of milliseconds it takes to access the data, the better."

You may have heard the term "double speed" or Multispin (a NEC trademark for double speed). This is the latest in disc speed and refers to the transfer rate. It's the hardest rate to improve because it works with the variable rate at which the disc is spinning. All the speed improvements to now have to relate to the access rate, which has been easier to work with. Watch for more and more improvements in both of these areas.

Did I hear someone ask about standards? Because, today, virtually every CD-ROM drive conforms to High Sierra and ISSO standards, this is ceasing to be a high-priority category. (It's like shopping for a new car and making sure it has a heater. Not exactly necessary, because they all do!) BUT, there's another new kid on the block: the Kodak Photo CD. Kodak's proprietary process allows you to transfer slides to a Photo CD and view them on your television monitor. The newer CD-ROM drives will read a Photo CD --some of them are rated for single-, others for multi-session compatibility, meaning the Photo CD can be written to more than once (ie, you can add more slides), with the multisession CD-ROM drives able to read those Photo CDs wherein more than one group of slides have been added. This has ramifications for long-term school use--such as school pictures, yearbooks and the like.

Do you know you can play Audio CD's on a CD-ROM drive? As I write this at home, I am listening to "In the Christmas Mood" with the Glenn Miller Orchestra. I have a receiver/amplifier and two big speakers connected via the back of my AppleCD 150 drive, so I get CD quality sound from the drive. Though I installed these so I could hear discs like The Orchestra and The Silly Noisy House optimally, I was thrilled to discover I could listen to Audio CD's as well. Multi-purpose technology is great!

If you don't connect speakers to the CD-ROM drive, you won't get the true quality sound from some discs and you won't get any sound at all from others. (Of course, some discs don't have sound at all.) PC's will need an additional sound card to get good sound. Look for a drive that has dual jacks on the back so that amplified speakers can be connected directly to the drive. Most, if not all, drives have a

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CD-ROM Drive...
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headphone jack on the front of the drive, but speakers can only be connected directly via the two jacks on the back.

It's important to make sure that the CD-ROM drive connects to the computer via its SCSI port, rather than serial port. Less-expensive models that connect through the serial port make you pay in reduced speed.

Regarding price: it's always better to buy the best you can afford. List your essential specifications, find the drives that have them and buy the best priced drive you find. drives today range from $399 to over $1000. Street prices, of course, vary greatly and the wise shopper responds accordingly. Shop around. Look for educational discounts and end-of-year sales.

Some good news Recently, I noticed a display of CD-ROM titles in a national bookstore chain branch--when the mass marketers start carrying products availability increases and the price decreases.

While looking at drives, consider the upscale alternatives: towers, multichangers, jukeboxes, and stacking drives. If you need two or more drives, one of these alternatives may be right.

Finally, here's a list of six articles and one book that contain excellent reference material. The article in PC Magazine has 22 pages of detailed reviews of CD-ROM drives. Each provides its own list of further reading to help you choose. Don't hesitate to write to us at the Information Searcher if you have questions or comments. We're always glad to hear from readers and we'd really like to know how you made your decision and what the results were.

Good luck and Happy New Year!

For More Information

Articles:

"Buying Your Next CD-ROM Workstation? Some Practical Tips." By Becky Lockwood Grossman, **CD-ROM Professional,** January 1992, Page 70.

'CD-ROM Drive Buying Tips-Part 2." By Becky Lockwood Grossman, **CD-ROM Professional,** May 1992, Page 68.

"CD-ROM Drives Catching On." By Becky Waring, **New Media,** 1993 Multimedia Tool Guide, November 1992, Page 39.

"CD-ROM Drives: Mass Appeal." By John R. Quain, **PC Magazine,** December 22, 1992, Page 293.

"The Real-World Advantages of Double Speed Drives." By Chris Cosden, **CD-ROM Professional,** September 1992, Page 66.

"Review Roundup: CD-ROM Drives.' By Bruce Connolly, **Online,** March 1992, Page 36.

Book:

CD-ROM Software, Dataware, and Hardware: Evaluation, Selection, and Installation. By Peter Jacsò, Libraries Unlimited, Inc., 1992.

Coming Attractions...continued from page 6

category, year or other key word. The text is accompanied by more than 200 pictures from the ceremonies and over 60 minutes of sound including many memorial events from the Grammy Awards.

History of the World. Bureau Development, Inc. DOS/MAC Winter 1992/3

A complete and authoritative collection of works from the dawn of civilization to present day including textbooks, major works, eyewitness accounts, essays, pictures and sounds. Features capability to search by subject, author, word, and phrase, as well as to paste and cut sections into documents for research and curriculum use.

Mayo Clinic Family Health Book. (MPC) Sony Electronic Publishing & Interactive Ventures & the Mayo Clinic. Recently released

Provides vital information on more than 1,000 diseases and disorders including those pertaining to newborn and infant care, problems of the elderly, nutrition, cancer, heart disease and drug abuse. It features 1,300 pages of text, full text search capabilities, 45 animated illustrations, 500 color illustrations and 90 minutes of Redbook audio.

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veyed participants regarding the quality of the workshop instruction and their actual experiences with Dialog Classmate. Word of the program had spread quickly and questions cropped up at the Reference Desks through out the summer.

Delighted with the initial success, we decided to continue. Based on survey responses the workshops were slightly modified. We included more hands-on search exercises and, to the roster of 13 basic walk-in workshops, we added three beginner classes demonstrating subject focus and three refresher sessions. We also decided to offer workshops for individual classes on an on-demand basis. By 1992, after three semesters the program has reached 699 participants, with 321 hours searched. Clearly, this experimental program is working!

How exactly does it work? The three key components are: workshops (teaching how to search), password administration (access) and facilities (how to get online).

Workshops

Working with Dialog Information Services staff, librarians at Bobst devised the basic workshop model for teaching both open and subject-specific workshops. A typical two-hour session focuses on concepts and skills necessary to use any computerized information source successfully - - just the "basics" common to an OPAC, a CD-ROM index and to online services like Dialog Classmate. Limiting the content to the essentials allows these classes to concentrate on conceptualizing a research question in terms of computer logic and to demonstrate the circular process of an evaluative path.

Our "Basics"

1) ***Command sequence*** -- Searching follows a set sequence: choose a database; use key words to find results; look at and evaluate results; print/download relevant items.

2) ***Matching word(s) typed to word(s) found*** -- computers operate by matching character strings ("words") in the search statement to character strings ("words") in the records.

"By 1992, after three semesters the program has reached 699 participants, with 321 hours searched. Clearly this experimental program is working!"

3) ***Breaking the research question into pieces & using boolean logic*** -- Creating search statements by breaking the research question into pieces (one per concept) and then using Boolean logical operators to restruct it.

4) ***Location, location, location. Or, it's not just what you ask for, it's also where you ask it*** -- "Words" can be requested to appear in a specific location (field) in a database record.

5) ***What is available from a computer?*** -- Recognizing what types of information are retrievable from a computerized resource.

6) ***Getting results*** -- Once a search is satisfactory, how to obtain a physical result (printout) and then locate the material (if not full text).

The workshops use a combination of teaching techniques - lecture, demonstration, joint exercises, small group work and individual practice. After the two hour workshop, approximately thirty minutes is spent on administrative tasks -- producing handouts, setting up equipment, managing passwords. Attendance is usually limited to no more than 25 per workshop. Despite their relatively small size, workshops are most successful with two instructors, one giving individual assistance and the other guiding the group exercises. The one-shot class is supplemented by several handouts and extensive documentation. From the program's second semester, we also scheduled several open refresher sessions to help new searchers reinforce and develop their skills.

Workshops are held in the Bobst Library Microcomputer Center in ; classrooms equipped with 12 IBMs. Networked, these computers share telecommunications software (ProComm, with identical set-up to the public searching terminals elsewhere in the library) and ports to the University's telecommunications network. Demonstrations use large-screen monitors connected to the PCs. Unfortunately, it is impossible to include the critically important hands-on exercises here, without the use of real computers, real connections, and real passwords.

Program Administration

The administrative key to Bobst's Classmate program is Dialog's ability to generate passwords valid for one cumulative hour of search time. Once the 60 minutes are used, the password self-destructs.

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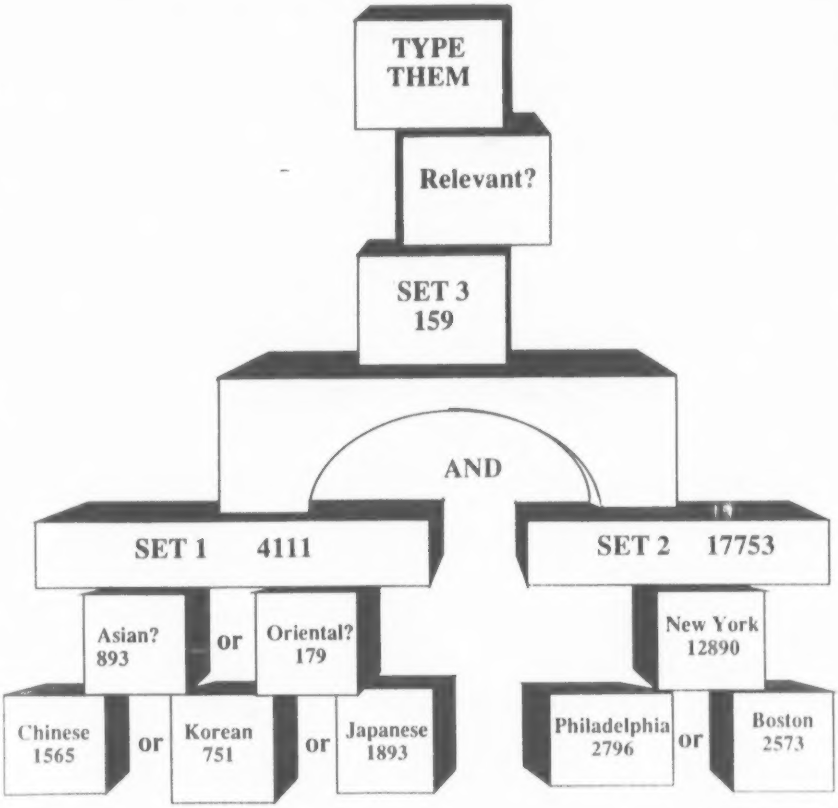
Bobst Library purchases passwords in advance, much like paying for journal subscriptions. Teaching searching becomes a known and predictable expense. Further, regulating distribution of passwords means controlling usage. We also recycle all passwords distributed but unused. We give each password an "alias"; at the end of the academic year we give a new alias to those unsearched, adding them to the password pool.

From the beginning, library policy was to subsidize searches partially for NYU students and faculty. In order to spread this support as widely and equitably as possible, we decided to give the first one-hour password free, after which participants may pick up passwords and conduct searches at any time.

Passwords are kept and distributed in the Bobst Microcomputer Center. After workshops, instructors distribute grey registration cards they must use to obtain the first free, and all subsequent passwords. Requiring a second step to receive passwords, instead of merely distributing them to all attend workshops, discourages those without genuine - or feasible research need so it also makes it less likely that participants will lose passwords before they get around to searching.



The building blocks of Boolean Searching

Facilities

Participants can search at any time, at any place with the requisite equipment. Initially, we assumed many would-be searchers would not have personal computers with modems and telecommunications software; therefore, we provided four search areas in Bobst Library. Each of our three Reference Centers has one public search terminal, not dedicated to Dialog Classmate, but shared with other resources, connected to the University's network, NYU-NET. Twelve computers in the IBM classroom in Bobst Library's Microcomputer Center are also available whenever that classroom is not otherwise occupied. These twelve are connected, via an NIU, to the University's gateway - making fifteen computers potentially available to participants whenever those areas are open.

Interestingly enough, nearly half our survey respondents said they used Dialog Classmate outside the library -- at home, work or another campus location. Though we thought that searchers would want the reassurance of librarians and documentation in the library while searching, but, apparently, for a significant number of them, the lure of searching at any time, from a more convenient location is stronger.

Our original intent was also to provide the same telecommunications software at any public search terminal in Bobst, presenting consistent and uniform commands.To accomodate other resources, we had to change this for one Reference Center, and we have seen that cause problems for Dialog searchers.

A quick comparison showed that printing while connected online

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took approximately three times as long as downloading to print later, offline. Because we wanted to encourage the most efficient use of searchers', and the library's time online, we did not provide printers for each library terminal. Additionaly, we felt we would only be giving students some of the necessary skills to handle electronic information if we did not also teach them how to manage it efficiently. Therefore, the process of downloading and the practice of doing it are parts of the workshop. For those needing paper copies, printouts from downloaded search results are available free from the Microcomputer Center. Future plans include providing guidelines on correct citation and on what constitutes plagiarism for searchers who have access to word processing software.

Project Evaluation

Throughout all three semesters we received regular usage reports from Dialog bills and data from Microcomputer Center records regarding password distribution. Registrants at workshops to filled out forms, that provided information as to their university status, experience with computers and research needs. At completion, we surveyed participants for feedback. In addition, for the project's duration there were group meetings of workshop instructors, consultations between would-be searchers and librarians and a great deal of informal discussion.

What observations can we now make? Not surprisingly, we know the program appeals to, or has a high visibility among, graduate students. But more than just graduate students: undergraduates or faculty also participated in significant numbers. Most had at least a basic familiarity with computers -- although not necessarily any experience with other computerized research tools. More often than not, they came to workshops with specific research needs in mind.

Regarding the databases used by NYU searchers, one of the features distinguishing Bobst Library's use of Dialog Classmate from similar programs is the fact that participants come from a wide variety of disciplines and are researching a very broad spectrum of topics. Of the more than 100 databases available, more than 72% were searched at least once during this program. That said, over time it has been possible to identify a group of consistently high-use databases. Surprisingly, these include several that are also available as CD-ROMs in the three Bobst Reference Centers (ERIC, Psychological Abstracts, MLA Bibliography). Usage indicates demand for these databases exceeds what can be met with the one dedicated computer located inside the library. Not so surprising, the next most popular resources -- after the usual "top ten"-- are full text newspaper and magazines databases: 15% of all databases searched, by hour. Everyone, even scholars, seems to want the full text, right there.

"A quick comparison showed that printing while connected online took approximately three times as long as downloading to print later, offline."

Of course, the ultimate question is: Is the program worthwhile? For the participants -- definitely! Comments like "Excellent service, saves much time [sic] in detailed and extensive searches," and "Best idea since the library" were frequent. When asked to rate its usefulness to their research needs, 37% said it was "essential," another 43% called it "useful," and only 9% said they "could use it once or twice." When asked if they would use it again, 65% said they "could use it a lot," another 16% would "if [they] had a major research project." Additionally, the program has a broad base of support among many disciplines and departments.

None of this means that participants found it easy to perform online searches. One acknowledged difficulties, while seeing its advantages: "I needed help for the first session...[did not use the password more than once] but, with some assistance, it's a useful research tool." Another simply wrote "Thank God for the librarian!" The library's subsidy of the first hour of searching was a critical factor in the program's success; many participants would not have tried it at all without that support.

While the two-hour workshop is certainly time-consuming and staff intensive, it teaches what participants think they need to know to search successfully. A whopping 80% responded that it covered "about the right amount" of material. They liked best the "'you can do it' attitude of the presenter" and the "clear explanation and step-by-step procedures." Attention was critical to the success of the hands-on exercises: it was "essential that experts were available to walk around the room and give one-on-one assistance."

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Networking...continued from page 22

Has it been worthwhile from the library's point of view? Well, we have been able to provide our patrons with access to far more computerized bibliographic resources than we could using only CD-ROMs. And, at a cost we can predict and control, though that cost is not cheap. Aside from the library's one hour subsidy, there are extra costs for online time spent in the workshops, as well as costs for documentation, administration, etc. Plus, it does require a considerable investment of staff time and effort to teach, publicize, and manage such a program, not to mention its impact on other library services. The extra time spent teaching online search techniques has added advantages, however -- afterward, students demonstrate a much better understanding of how to use any computerized research tool and the librarians have a model for teaching how to use other such tools, as well. In addition, the increase in traffic for ILL and Reference Desks truly means patrons are making more extensive use of library services. So here too, the answer must be "Definitely, yes."

For more information, contact:

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New York University, 70 Washington Square South New York, NY 10012 (212) 998-2513

electronic mail:
DYCKMAN@nyuacf [bitnet] or
dyckman@acfcluster.nyu.edu

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Dialog Announces Awards... continued from page 16

school year was presented to Montomery Blair High School in Silver Springs, Maryland. The 1988-89 First Place Award went to Wayland High School in Wayland, Massachusetts with eight Awards of Merit and Honorable Mention Awards to other schools and colleges. In 1990-91, Troy High School in Fullerton, California was the First Place winner with six schools receiving Awards of Merit and five schools receiving Honorable Mentions.

Dialog's first Classmate Instruction Program originated in 1976, when it was introduced as a cost-effective means of teaching online searching to library school students. Today more than 5,000 schools, colleges and universities participate in Dialog's Classmate Instruction Program to teach their students to effectively search online.

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Picture Atlas...continued from page 2

as still pictures. The quality of the pictures and sound is made sharper than National Geographic's previous CD-ROM programs by the use of Linkway Live!

National Geographic Society's staff has reported that the maps may be printed out. I have only seen maps printed by laser printers so I am unable to report on maps printed out on jet ink printers or dot matrix printers or, if in fact, these printers can actually do the job. The essays on each country and its vital statistics, like all text, can all be printed out on any printer.

For those of you who have been wondering, YES, National Geographic has new maps and designations for the old Soviet Union and other East European countries from the old Soviet Bloc.

Because **Information Searcher** wants you to have information on the latest CD-ROM products, even before they are released, my review is based on a Beta version of **Picture Atlas of the World**. Attendees at DATABASES IN SCHOOLS '92 and others who have seen this atlas demonstrated can't wait for its release.

At $99, educational price, this is a real bargain for school library CD-ROM collections.

(Editor's Note: A full review will be featured in a future issue)

Hurricane Andrew Monitored By Students

Hundreds of students, teachers and weather hobbyists tracked the progress of hurricane Andrew on their home and school computers.

Using personal computers, modems and the Accu-Weather Forecaster software package, they were able to get up-to-the-minute satellite photos, radar maps, hurricane updates and other vital information about this powerful and dangerous storm. The images and data were accessed directly from Accu-Weather, Inc., the world's largest commercial weather service. These are the same weather maps and data that are used by professional meteorologists.

For example, the image above is of Hurricane Andrew at the moment that the eye of the hurricane made landfall on the coast of Louisiana on August 25, 1992, 11:00PM. The image was available within minutes of the time that it was taken by the GOES (Geostationary Orbiting Environmental Satellite) weather satellite. At the same time that the meteorologists at the National Hurricane Center were analyzing these images, the students and teachers were analyzing the same images in their own. The eye of the storm is clearly visible in this satellite graphic. Correlation of this image with a standard latitude and longitude map indicates that the eye was located at 29.0 N latitude and 91.1 W longitude.

For more information and a review copy of Accu-Weather contact: Terry Lindquist, Accu-Weather, 619 West College Ave., State College, PA 16801 (814)237-0309

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